



RECLAMATION

Managing Water in the West

**45th Annual
Mid-Pacific Region
2012 Water Users Conference
Water Supply Outlook**

**Reno, Nevada
January 25-27, 2012**



U.S. Department of the Interior
Bureau of Reclamation



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Managing Water in the West

**Central Valley Project Operations
Sacramento, CA
Water Supply Outlook
January 2012**

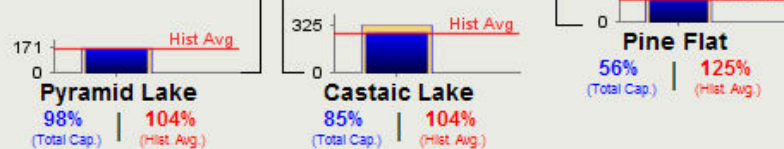
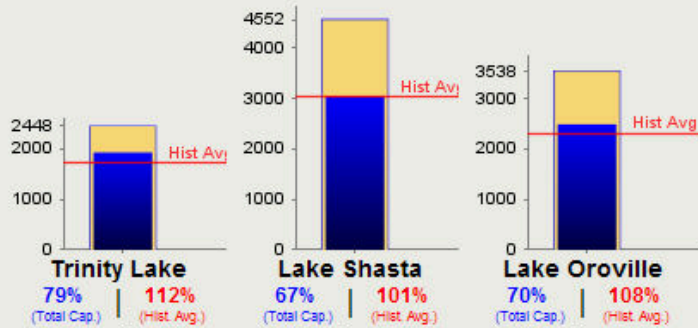


U.S. Department of the Interior
Bureau of Reclamation

Data as of Midnight: 17-Jan-2012

Change Date: 17-Jan-2012

Refresh Data

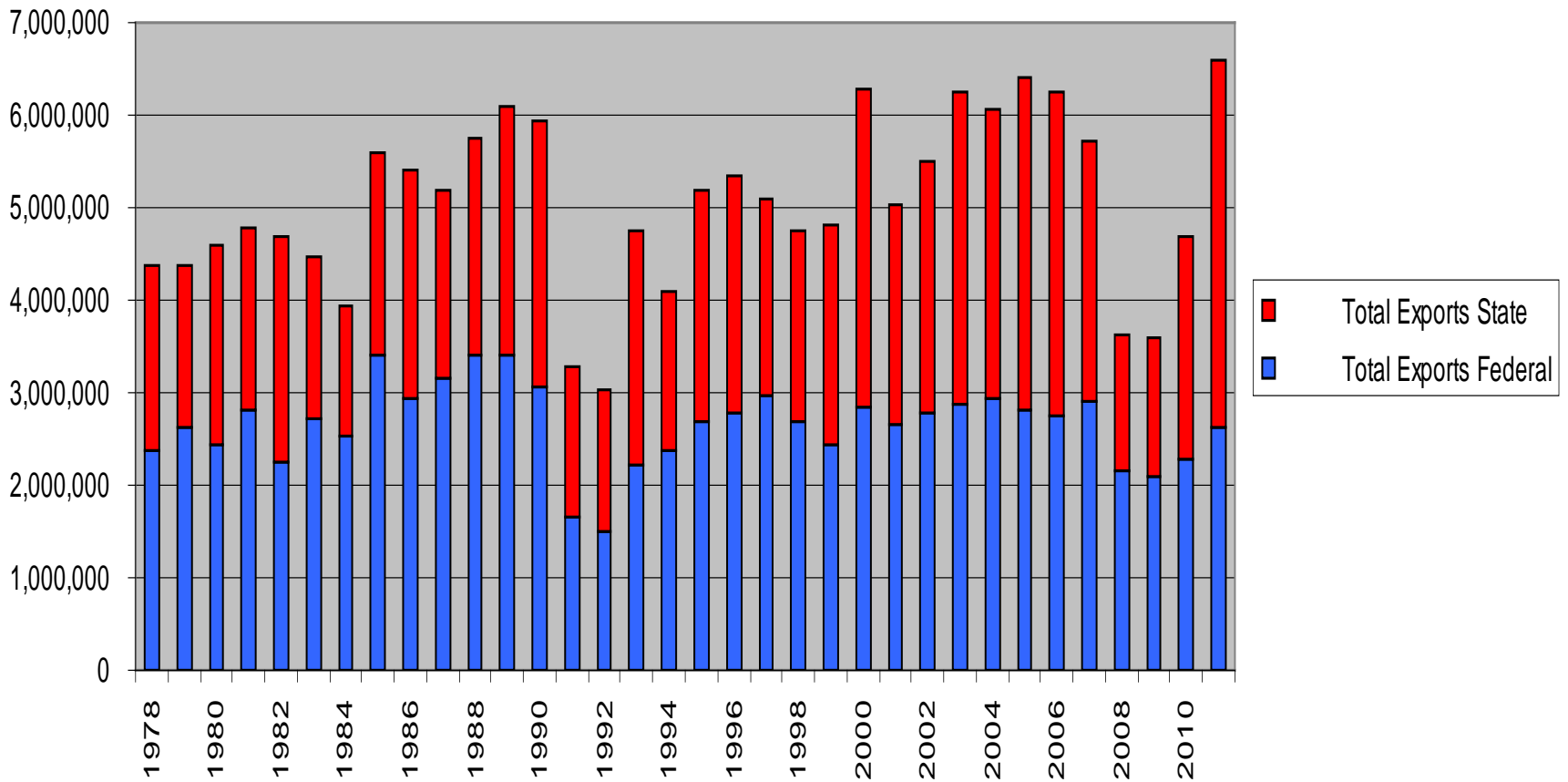


Current Reservoir Storages



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Total Annual Water Exports from 1978-2011



CVP Reservoir Storage

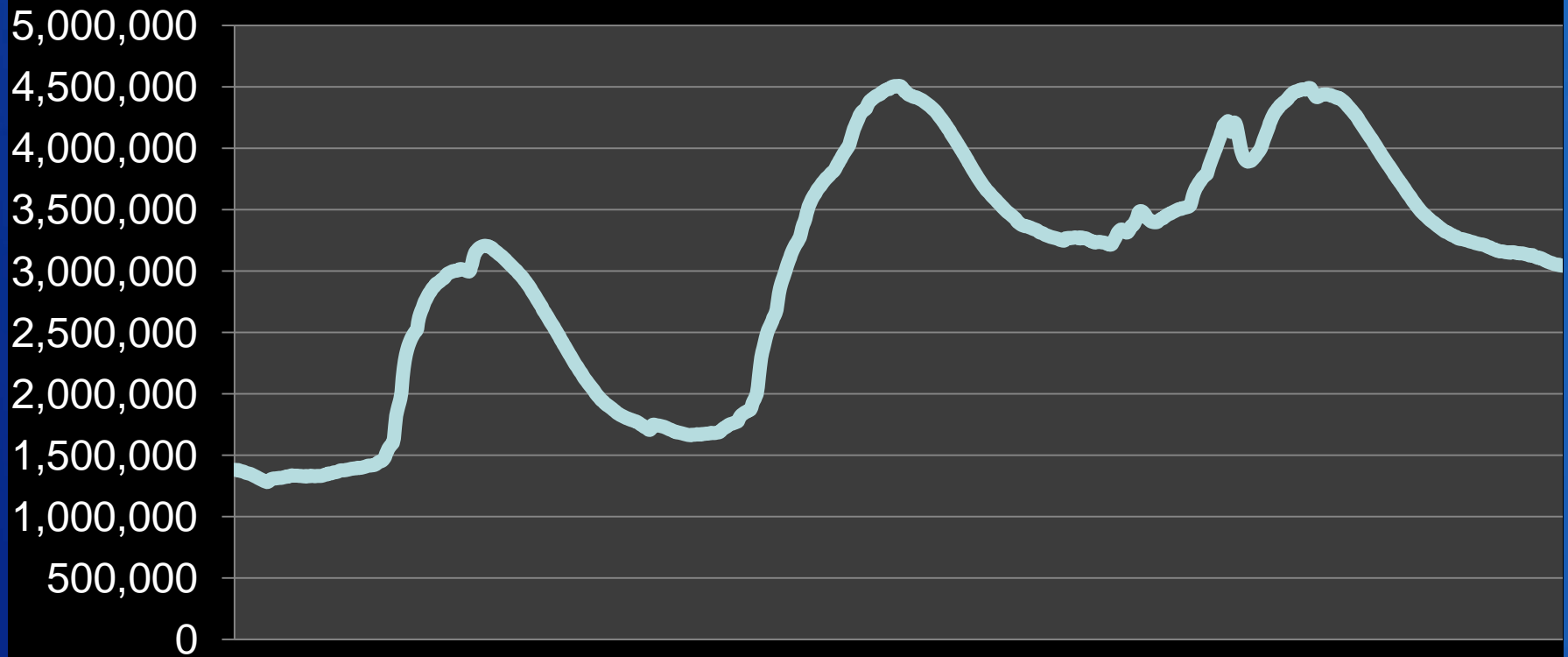


<u>Reservoir</u>	<u>10/1/11</u>	<u>1/23/12</u>	<u>15-yr Ave</u>
Trinity	2,167	1,942	1,673
Shasta	3,341	3,088	3,069
Folsom	740	409	452
New Melones	2,052	1,975	1,644
Fed San Luis	644	946	763
Total	8,944	8,360	7,601

Total Capacity: 11,360

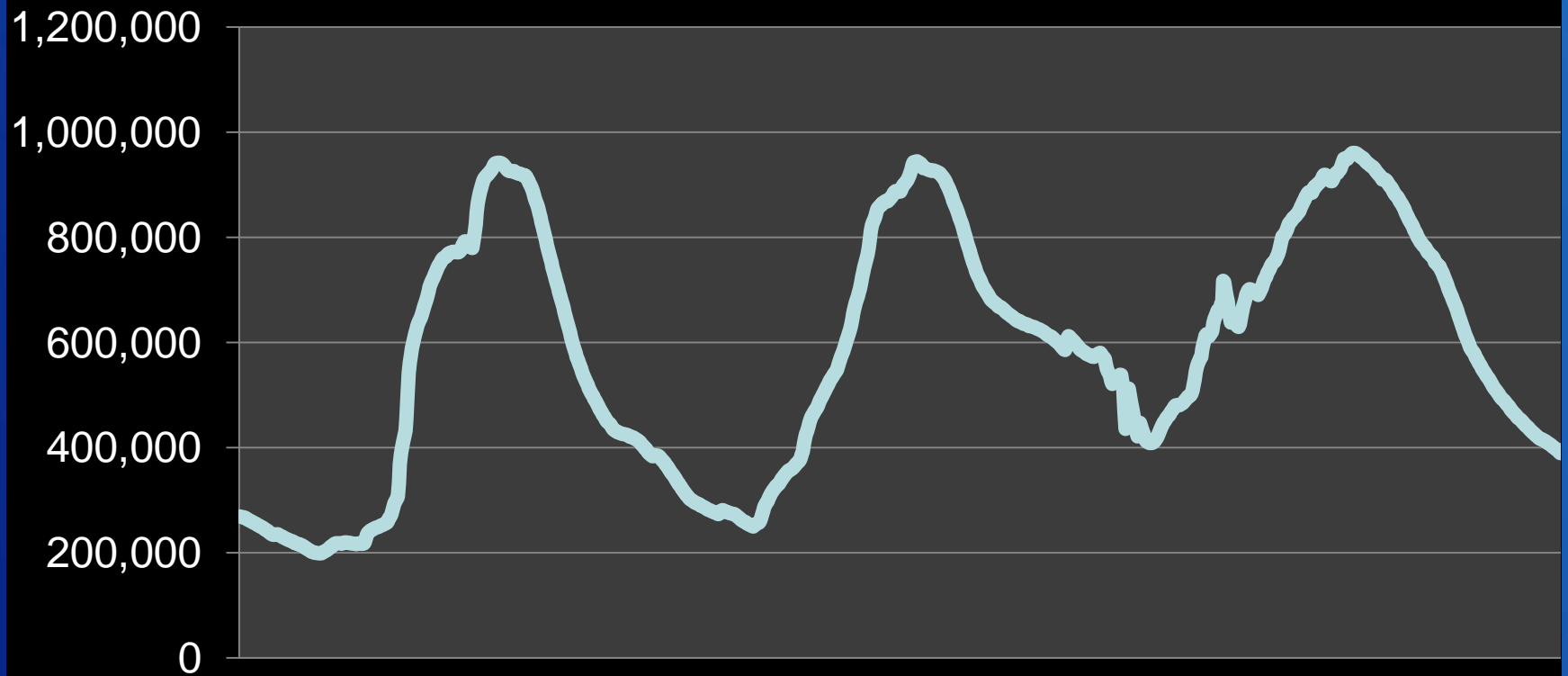
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Shasta Storage (AF) Oct 1, 2008 - Jan 17, 2012



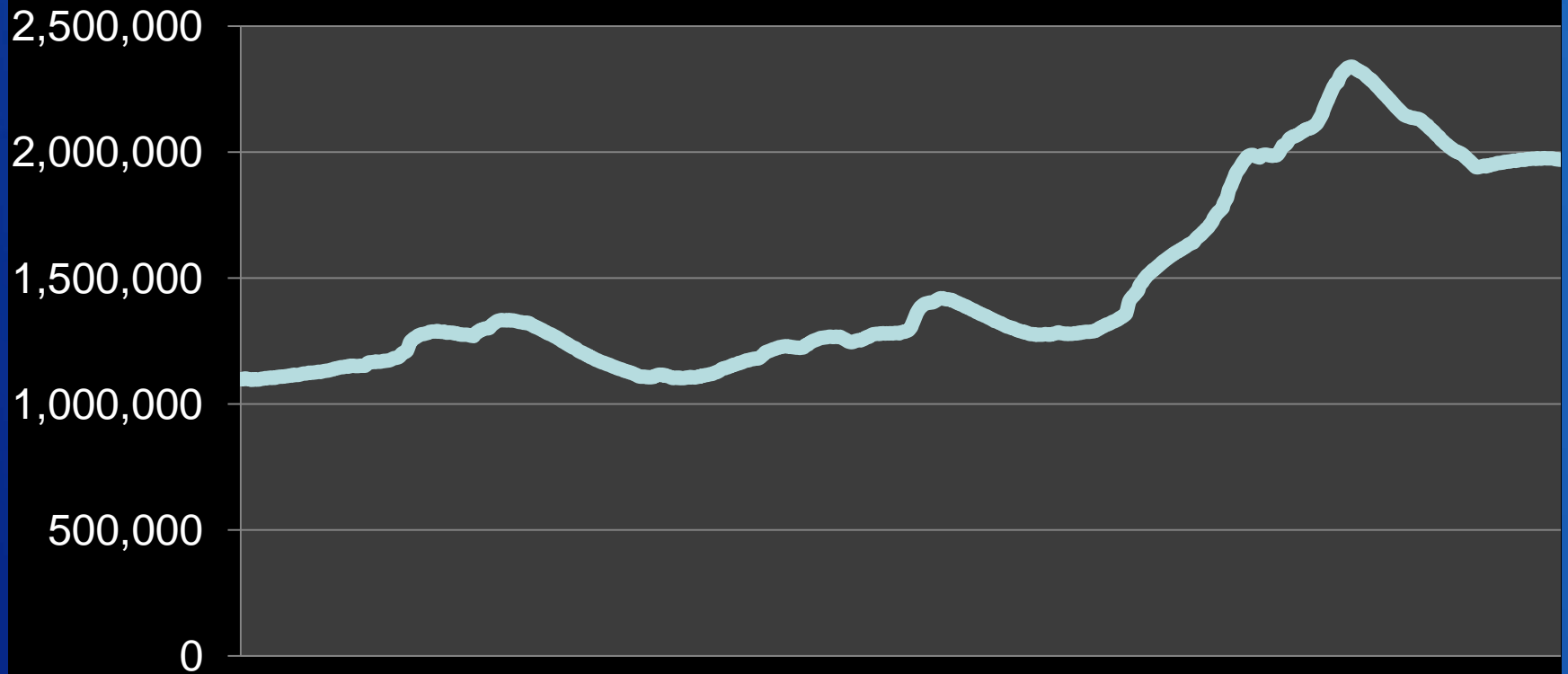
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Folsom Storage (AF) Oct 1, 2008 - Jan 17, 2012



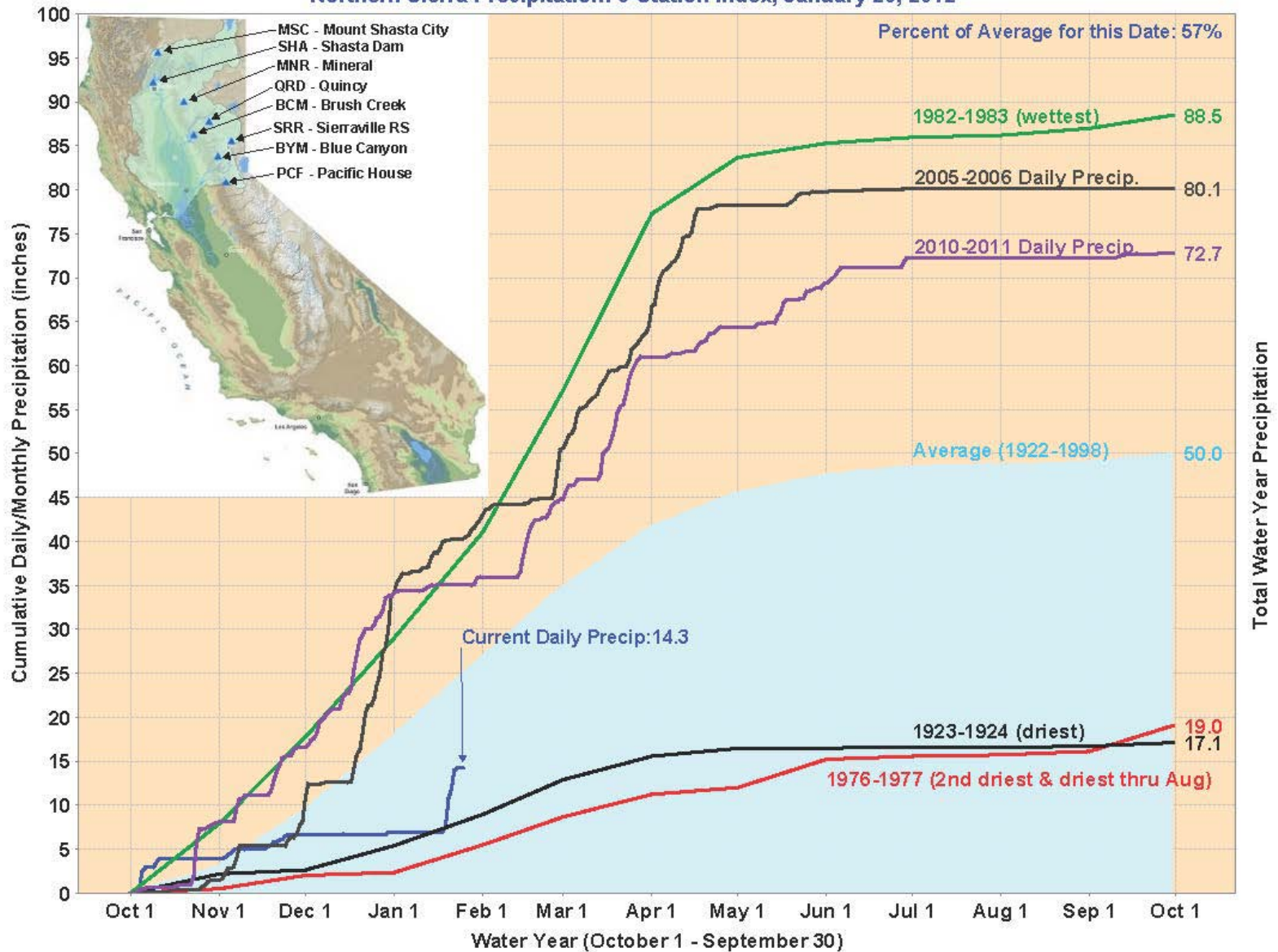
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New Melones Storage (AF) Oct 1, 2008 - Jan 17, 2012

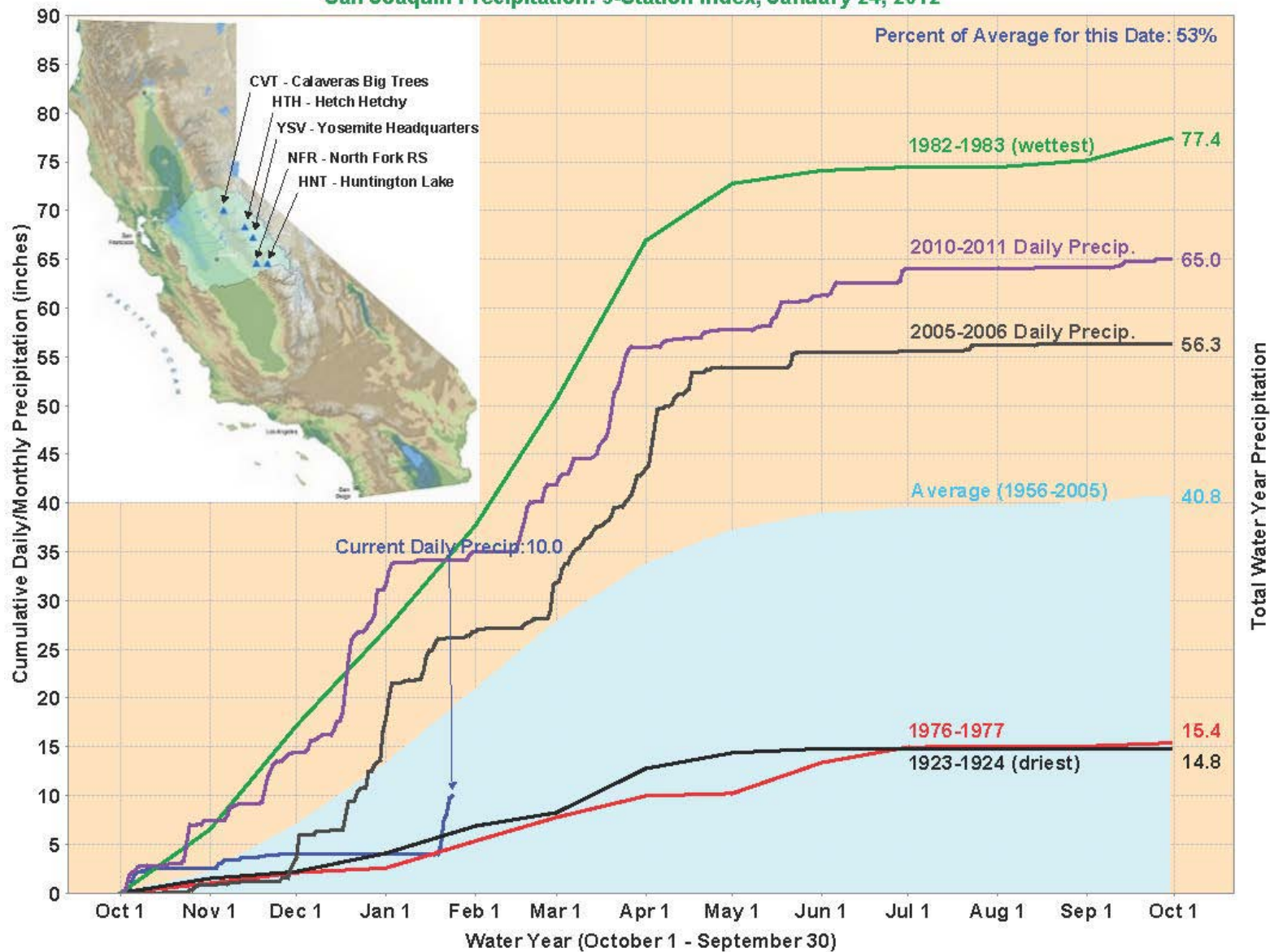


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Northern Sierra Precipitation: 8-Station Index, January 26, 2012

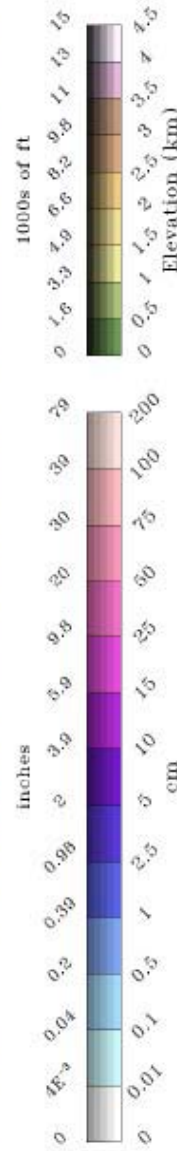
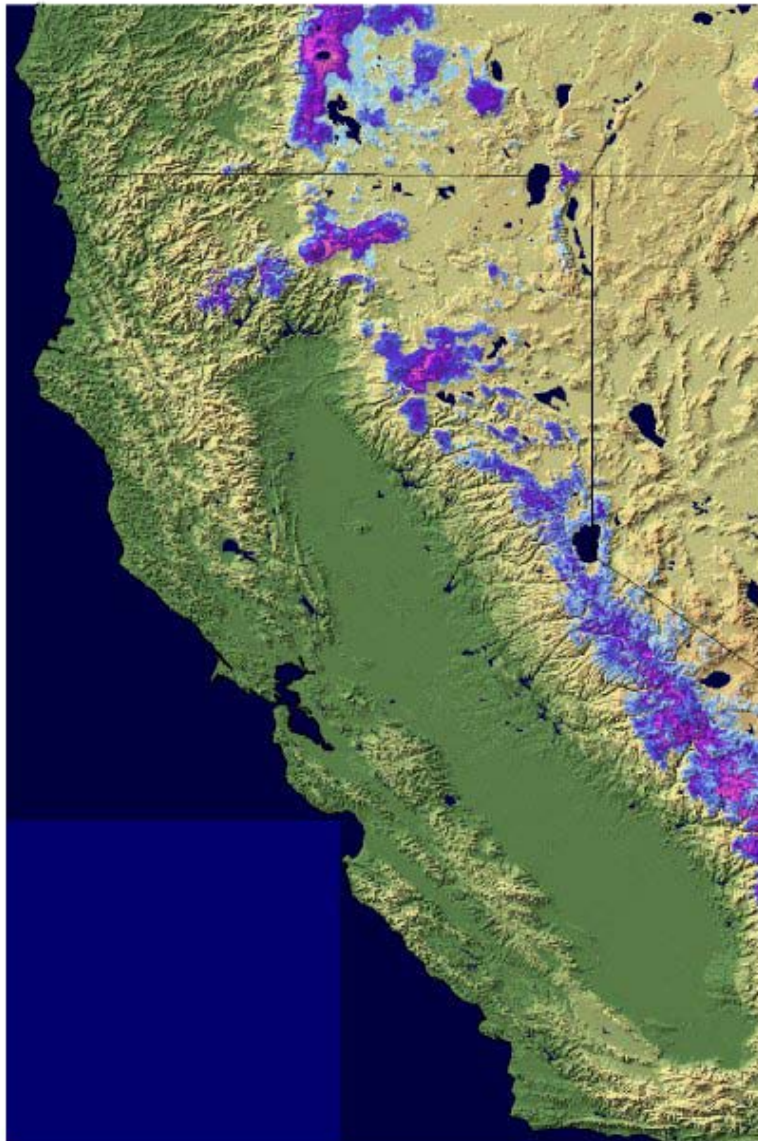


San Joaquin Precipitation: 5-Station Index, January 24, 2012

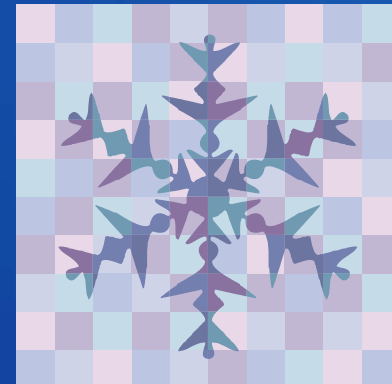


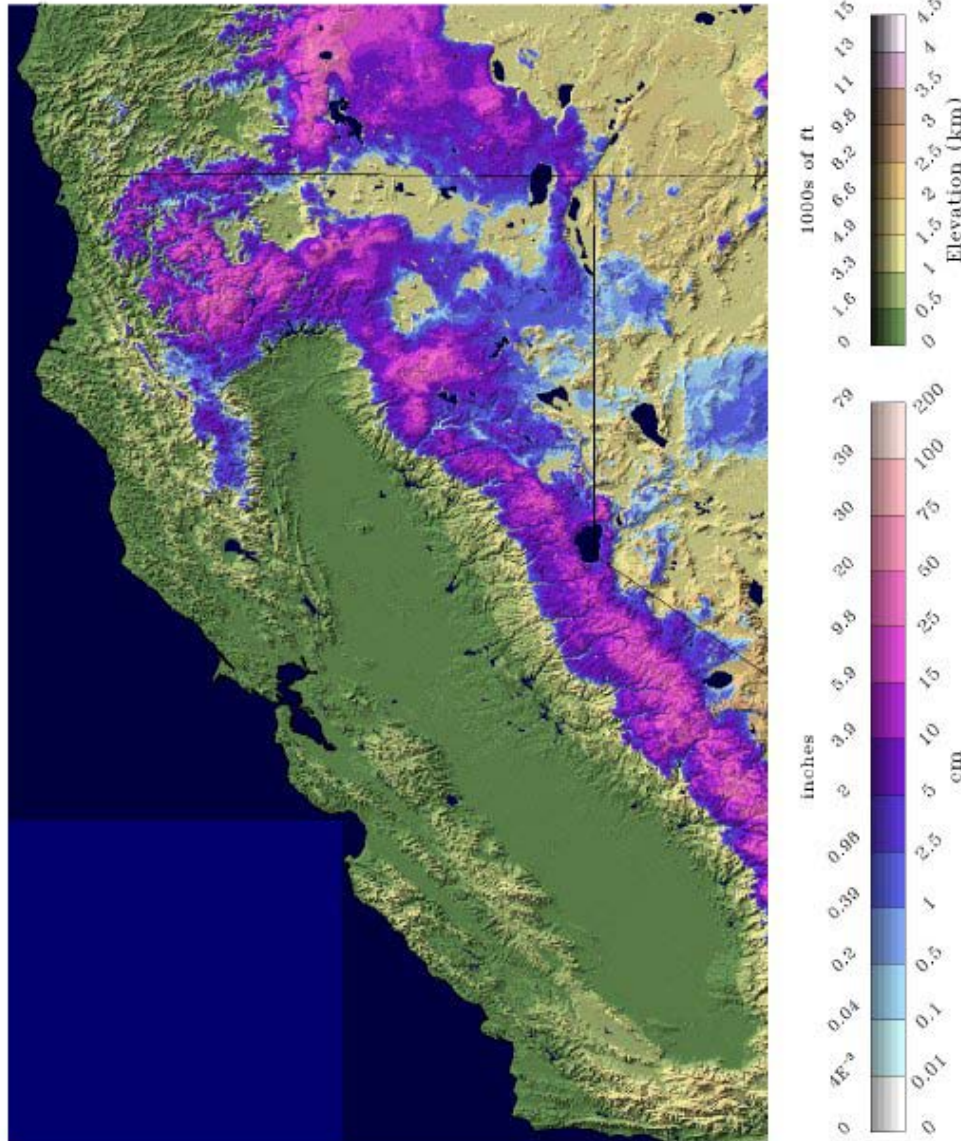
Snow Water Equivalent

2012-01-13 06

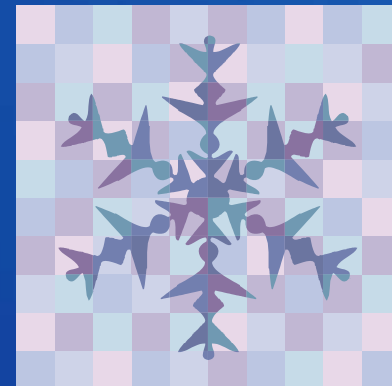


Mid-January Snow Conditions



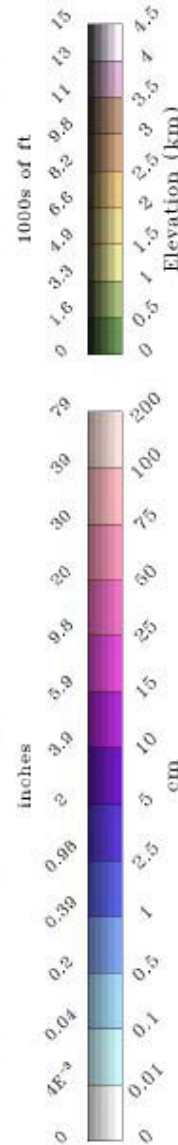
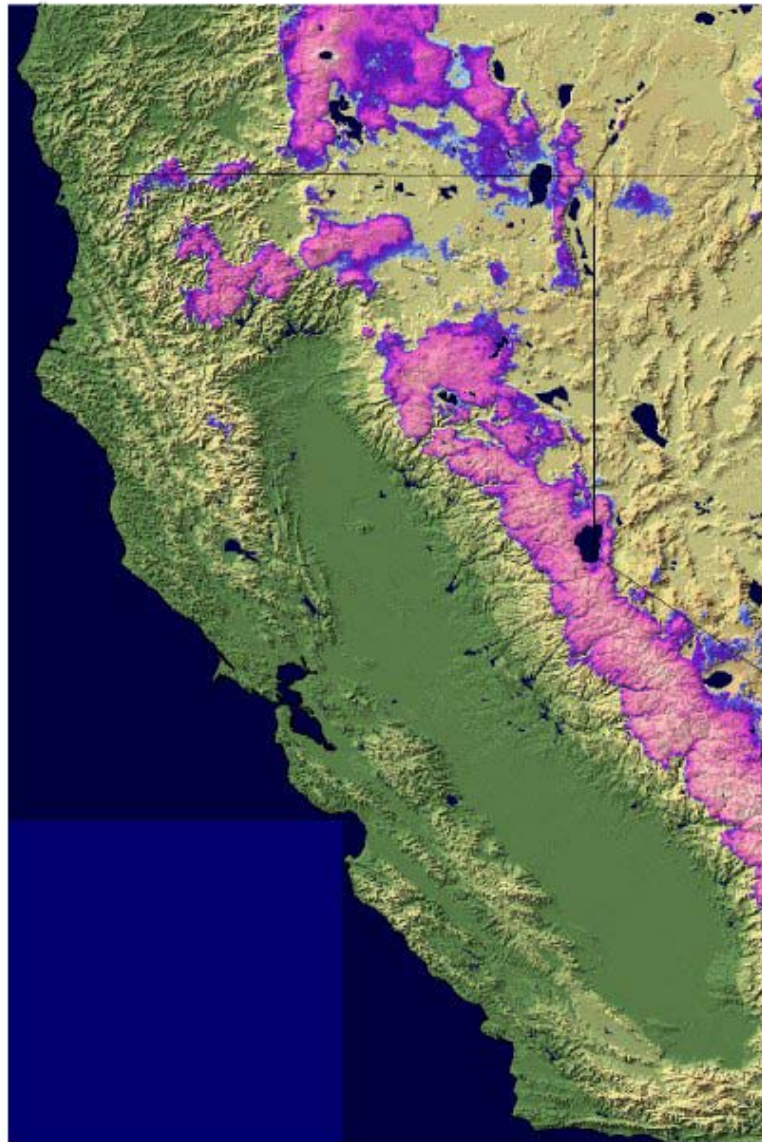


Late January Snow Conditions

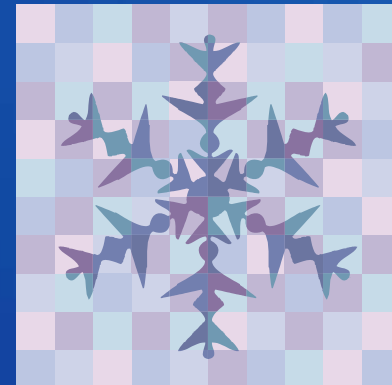


Snow Water Equivalent

2011-01-26 06



Last January Snow Conditions



**Snow Depths
Peterson Flat - Trinity
Elevation 7150**

Jan 2011

Jan 2012

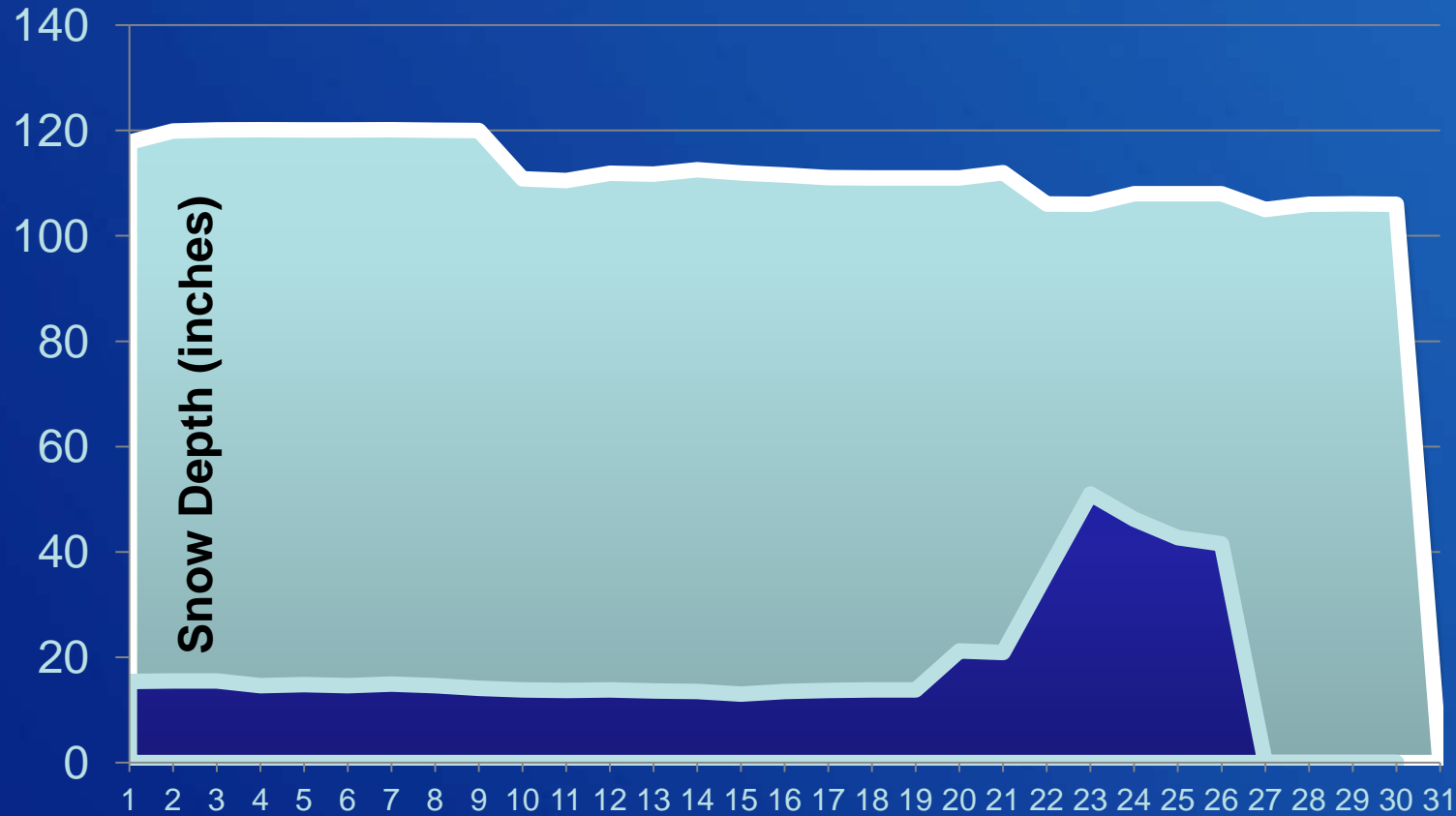


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**Snow Depths
Meadow Lake - Yuba
Elevation 7200**

Jan 2011

Jan 2012

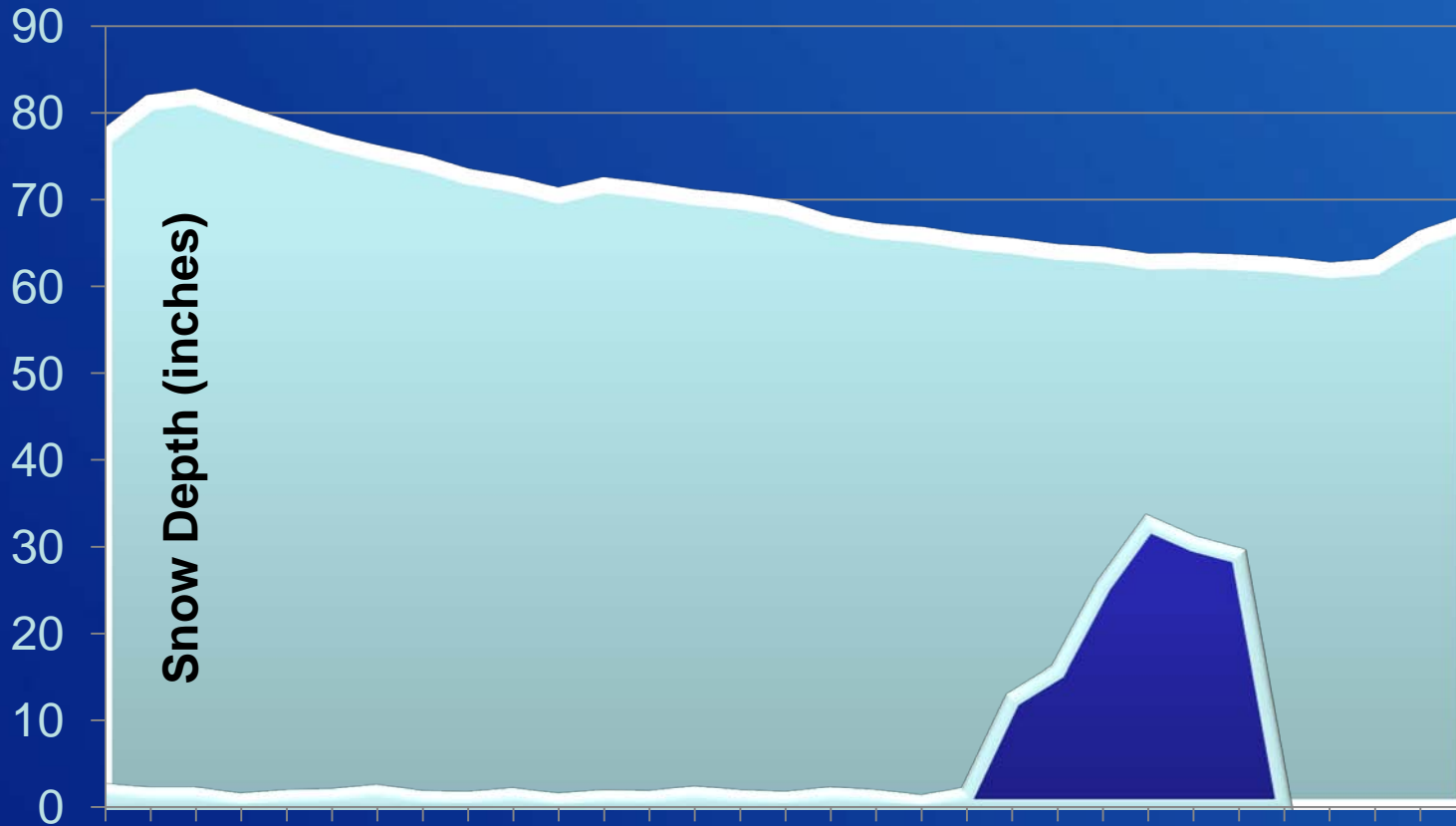


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Snow Depths
Deadman Creek - Stanislaus
Elevation 9250

■ Jan 2011

■ Jan 2012

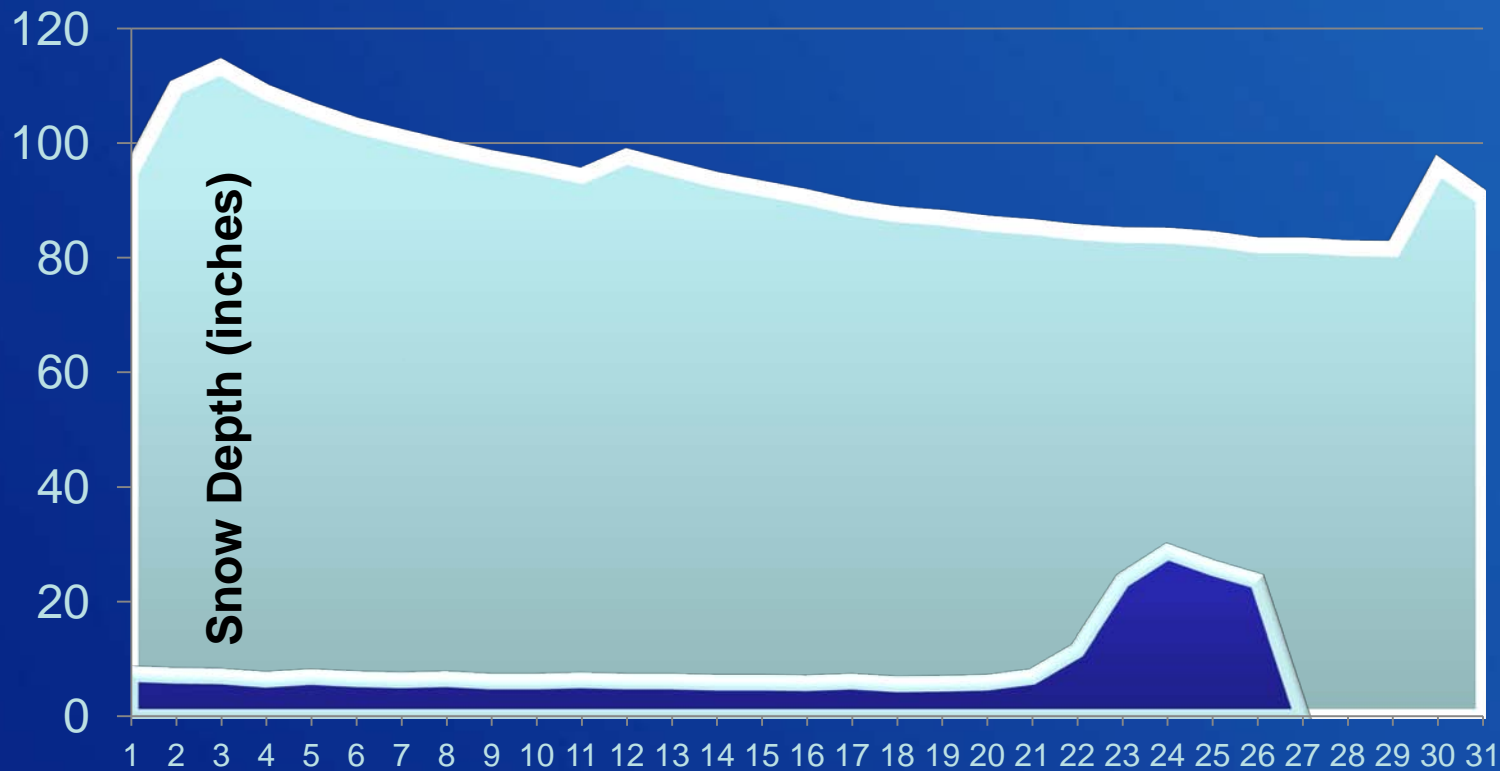


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Snow Depths
Green Mountain - San Joaquin
Elevation 9250

■ Jan 2011

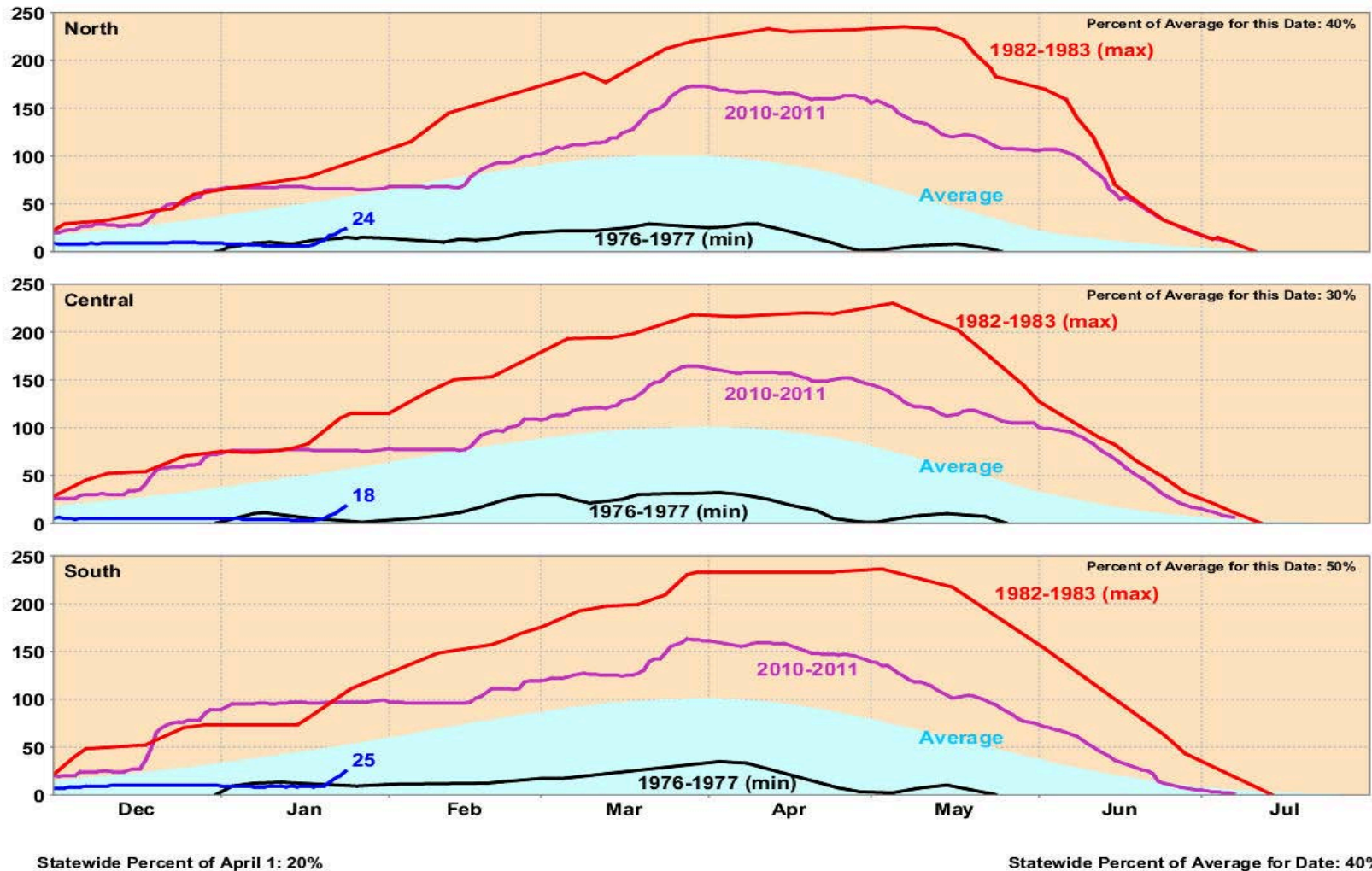
■ Jan 2012



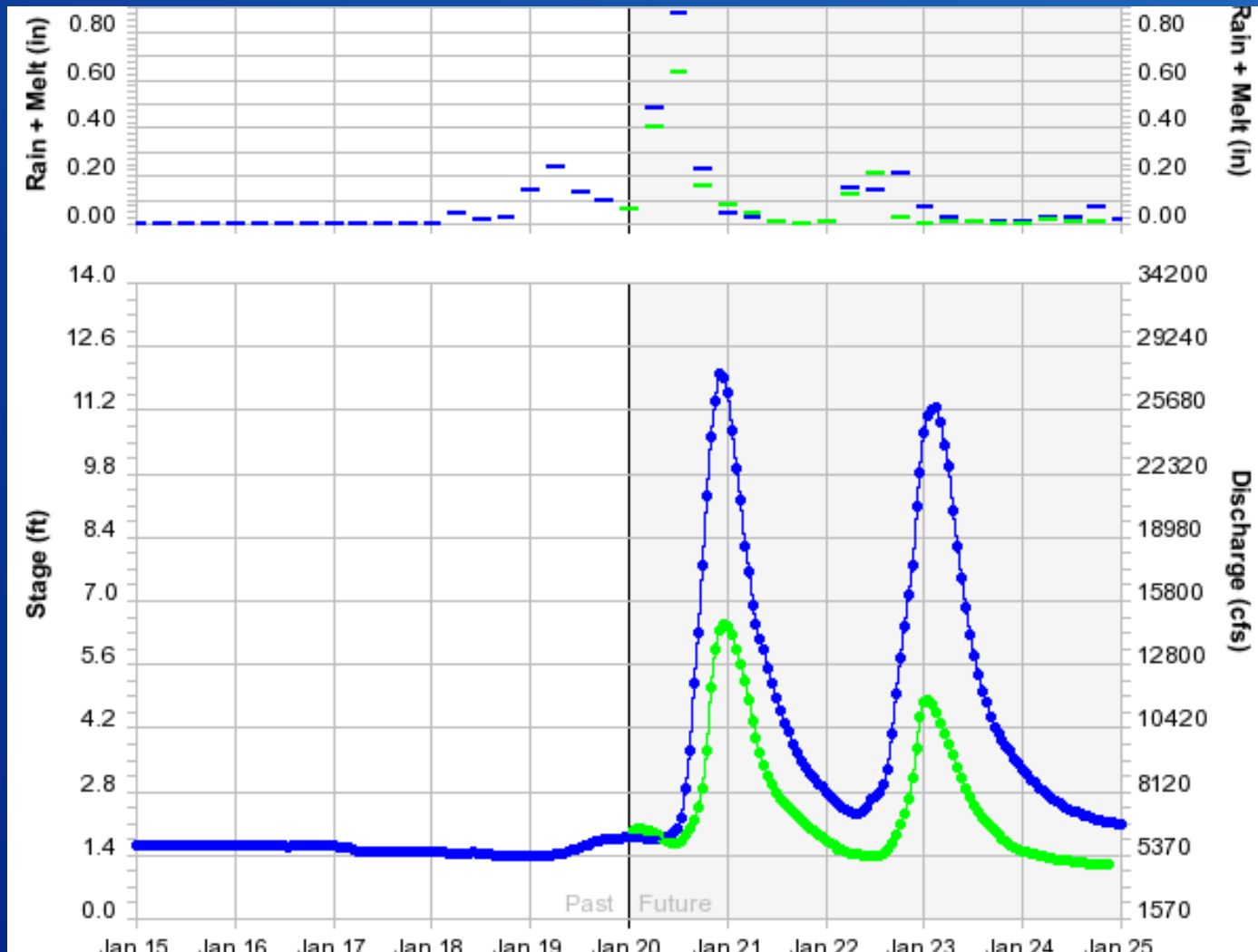
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Sierra Snow Pack

California Snow Water Content, January 24, 2012, Percent of April 1 Average

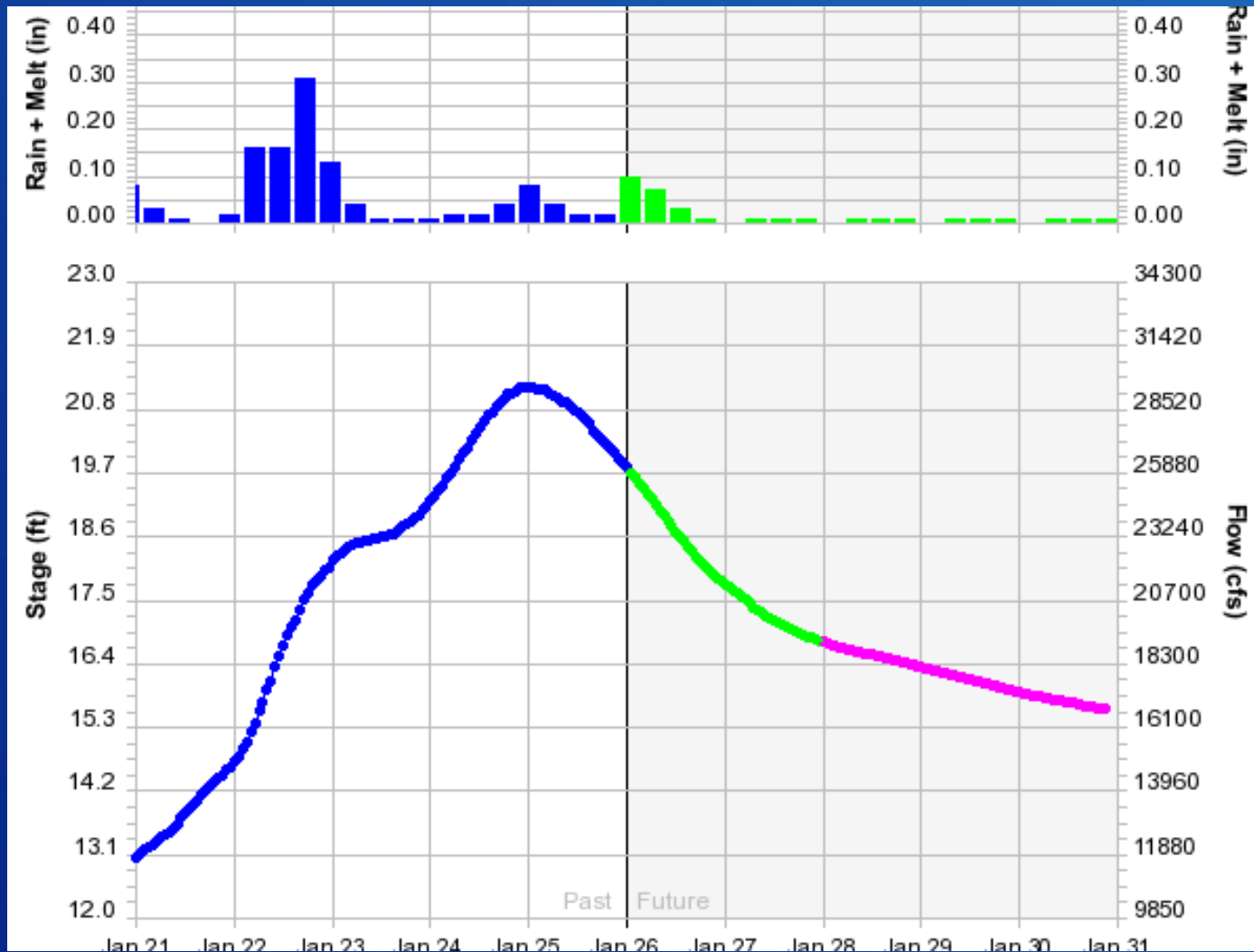


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Bend Bridge – Sacramento River

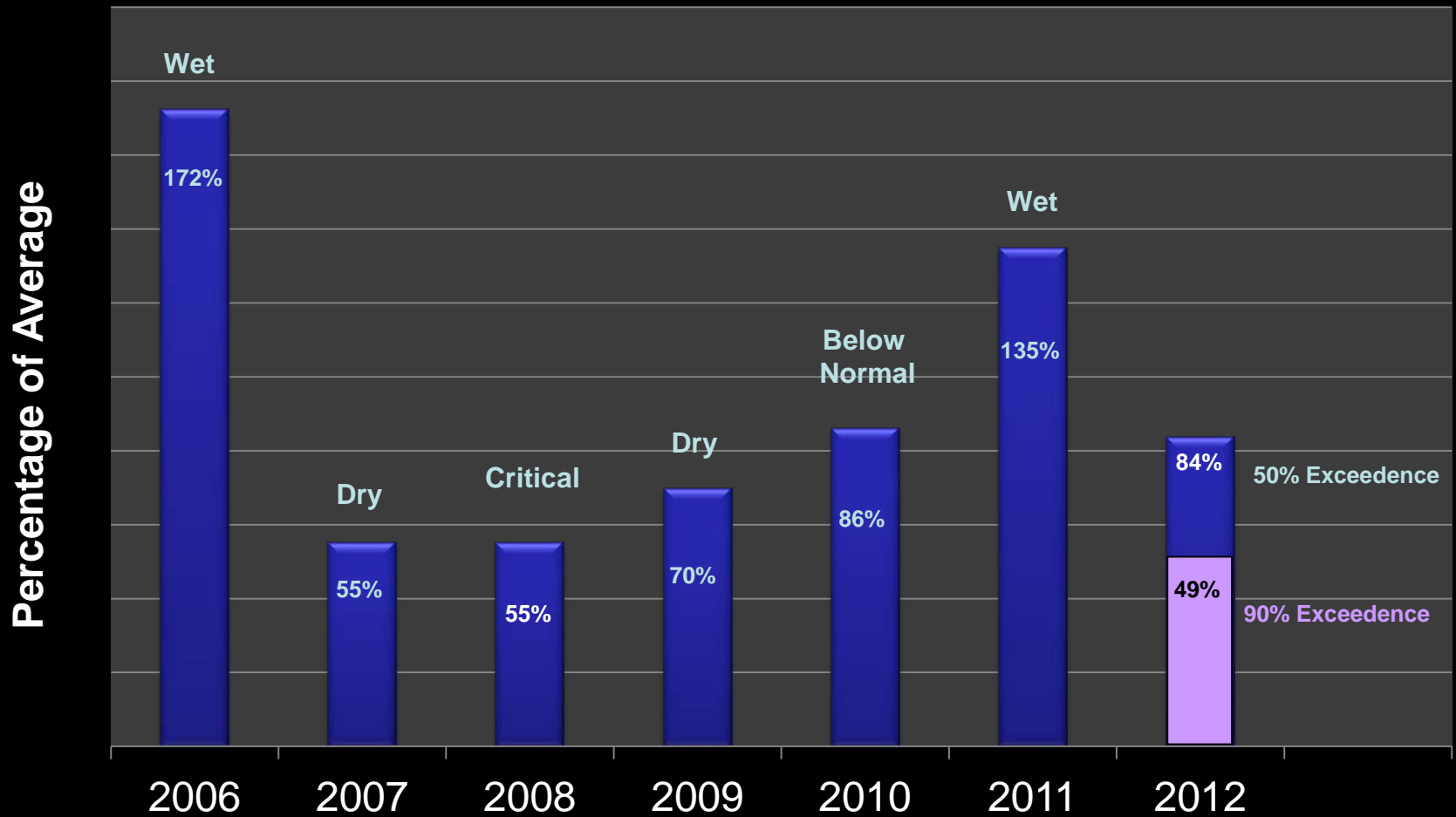
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Verona – Sacramento River

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Sacramento Valley Unimpaired Runoff



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Shasta Reservoir Annual Inflow Projections

- Inflow to date: 922 TAF
- 15 Year Average Inflow to date: 1,702 TAF
- 90% Exceedence Projection: 2,770 TAF
- 50% Exceedence Projection: 3,960 TAF
- Historical WY Average: 5,979 TAF

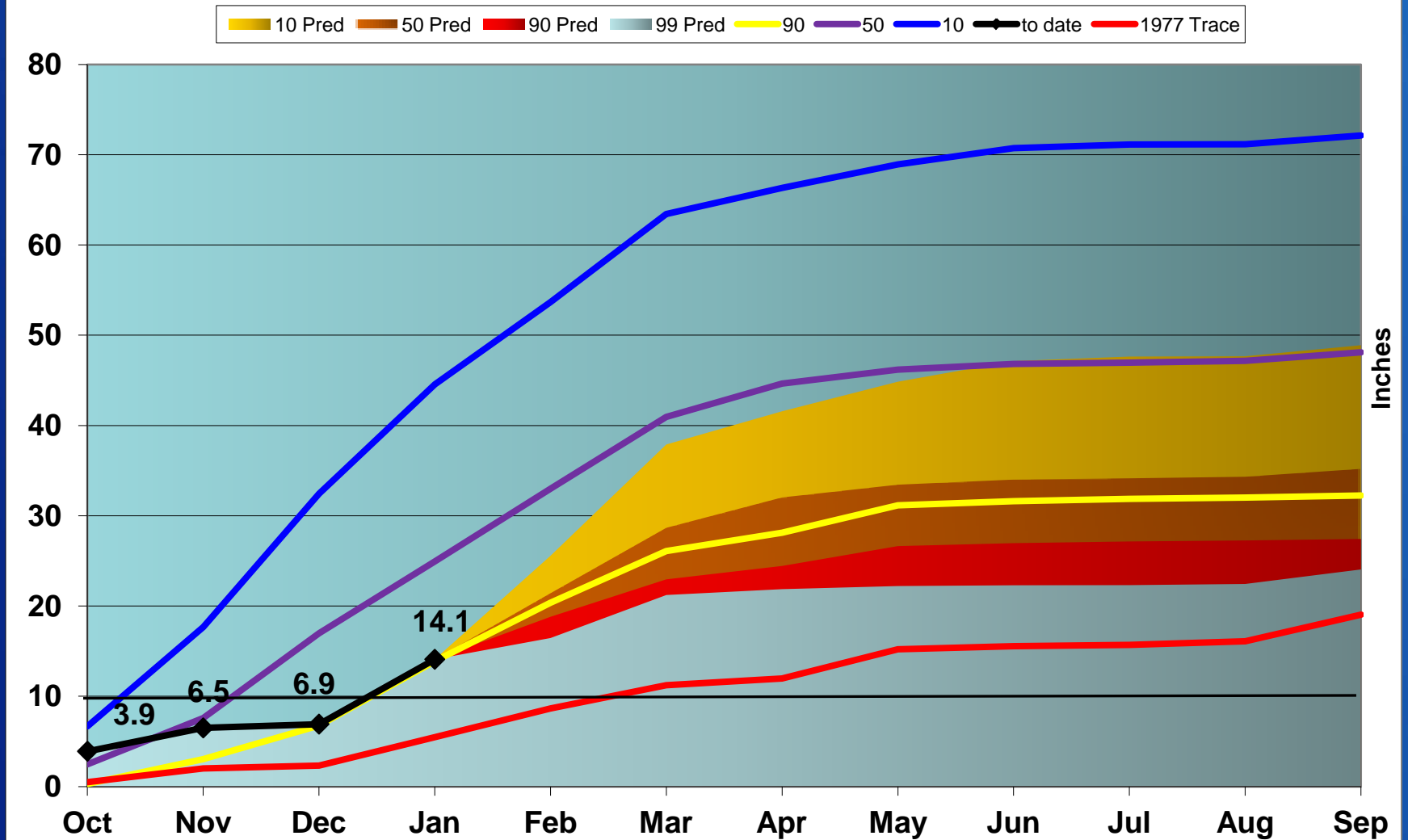
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New Melones Reservoir Annual Inflow Projections

- Inflow to date: 194 TAF
- 15 Year Average Inflow to date: 218 TAF
- 90% Exceedence Projection: 360 TAF
- 50% Exceedence Projection: 720 TAF

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Tracking 8SI and Probability Funnel Diagram



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Monthly Precipitation Forecast

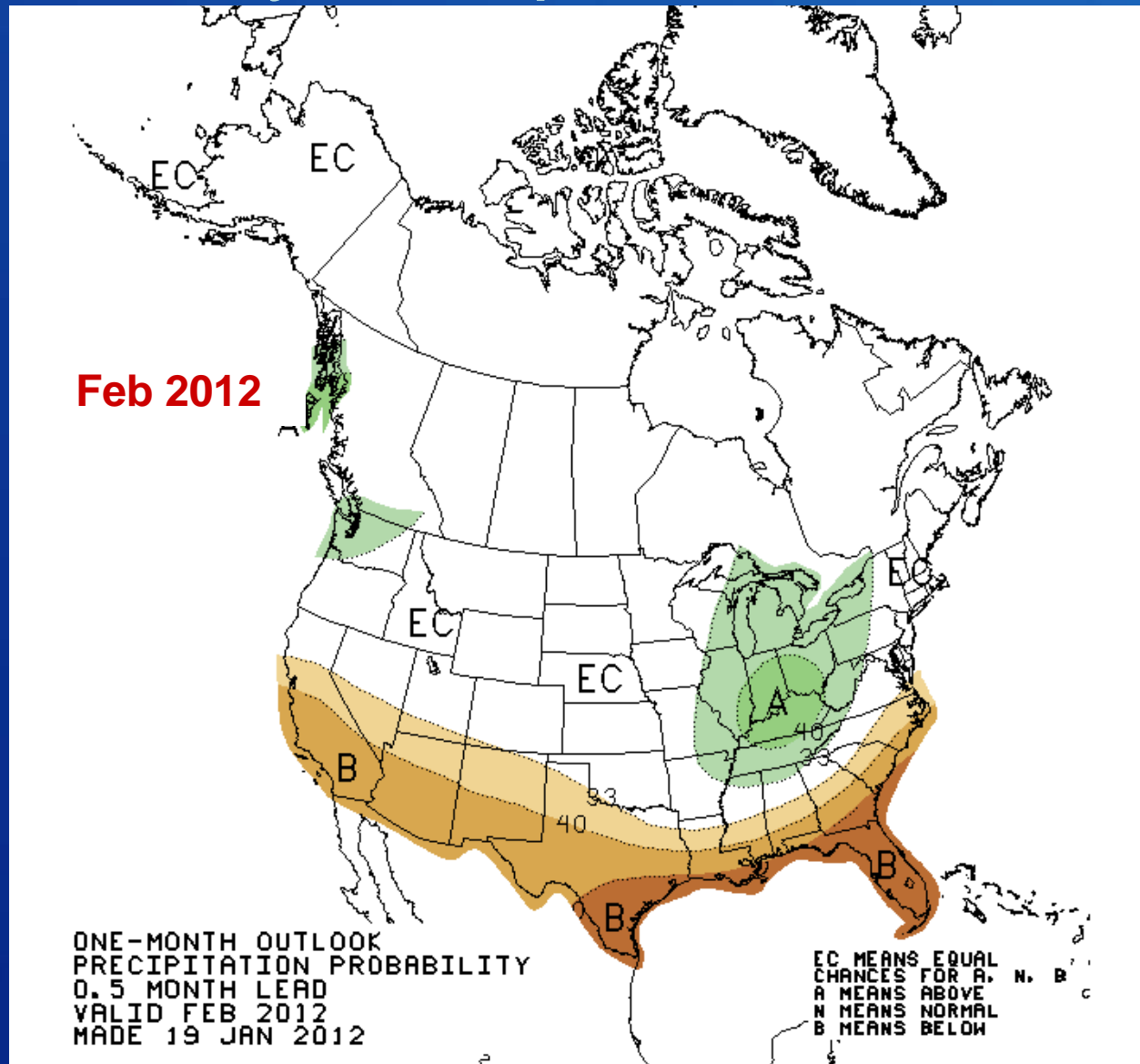
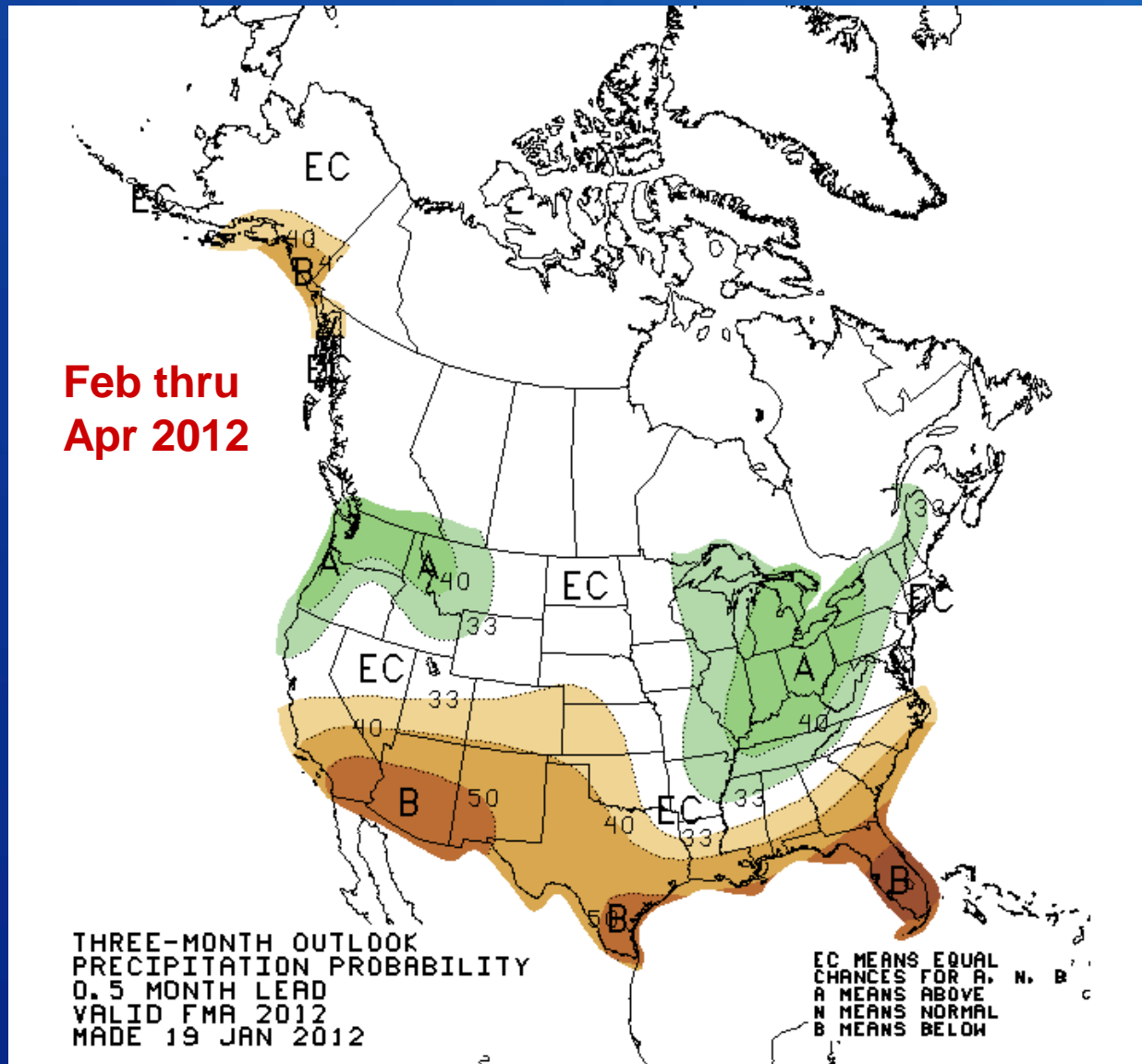


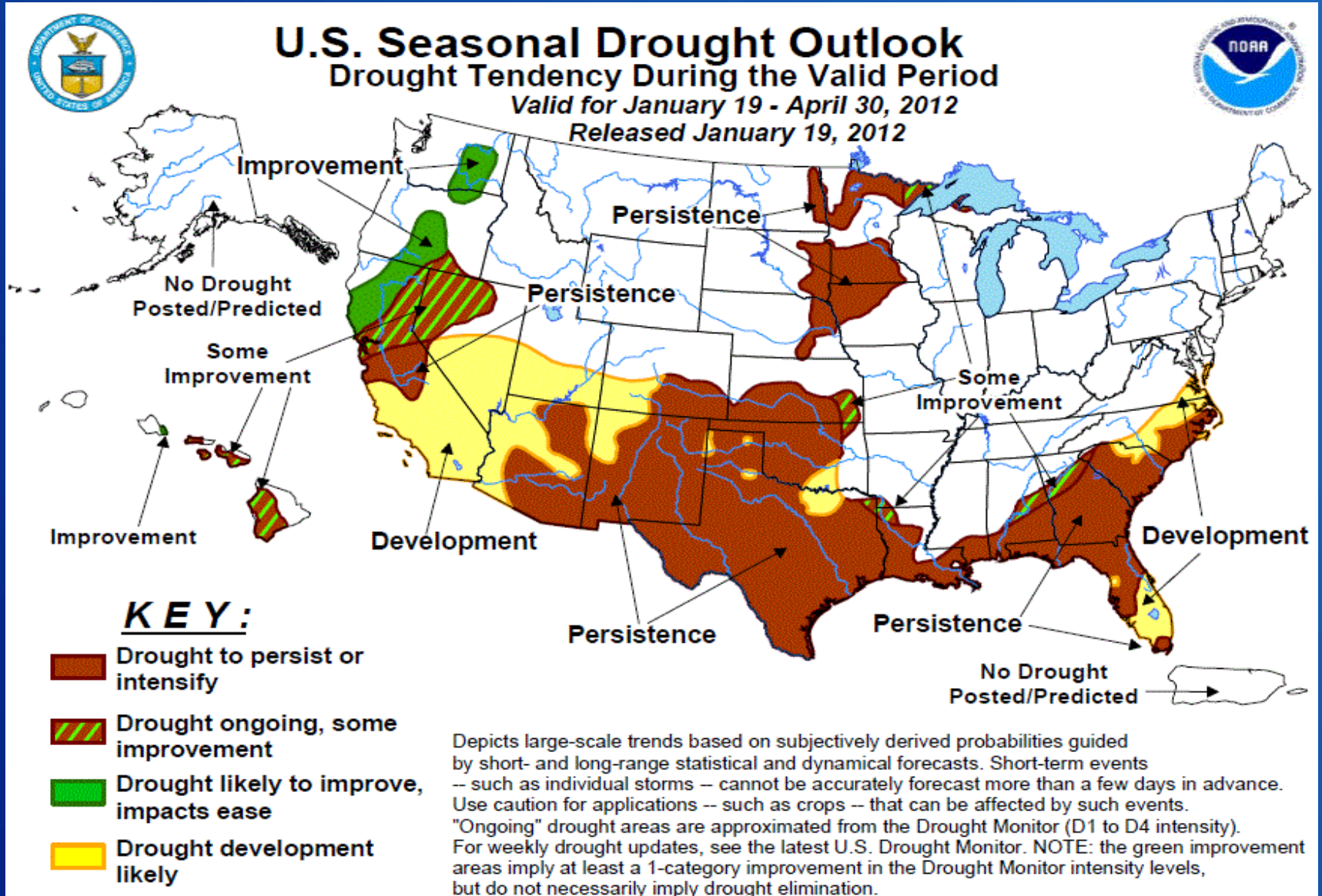
Chart from NOAA - CNRFC

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Three Month Precipitation Forecast



Drought Outlook



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**South-Central California Area Office
Fresno, CA
Water Supply Outlook
January 2012**



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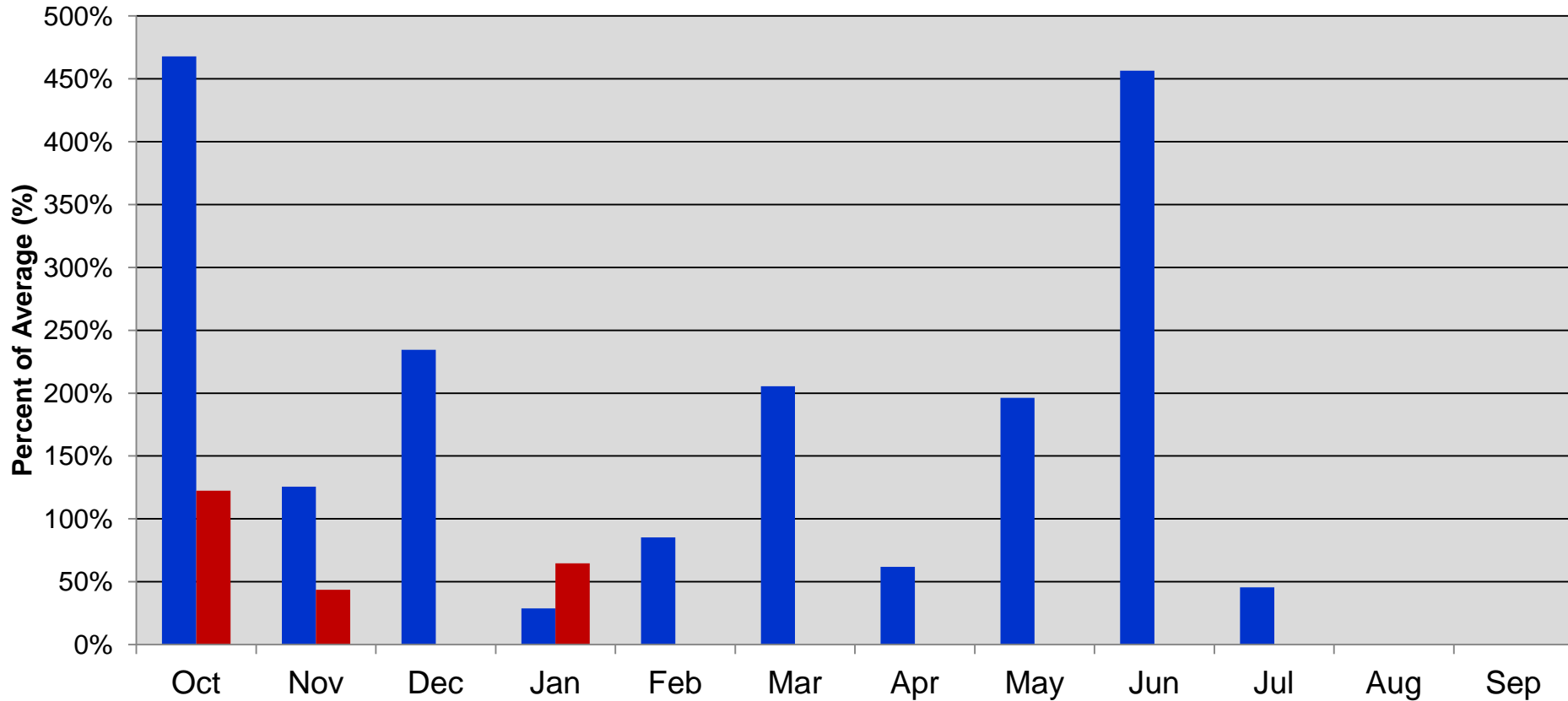
2012 Friant Division Outlook





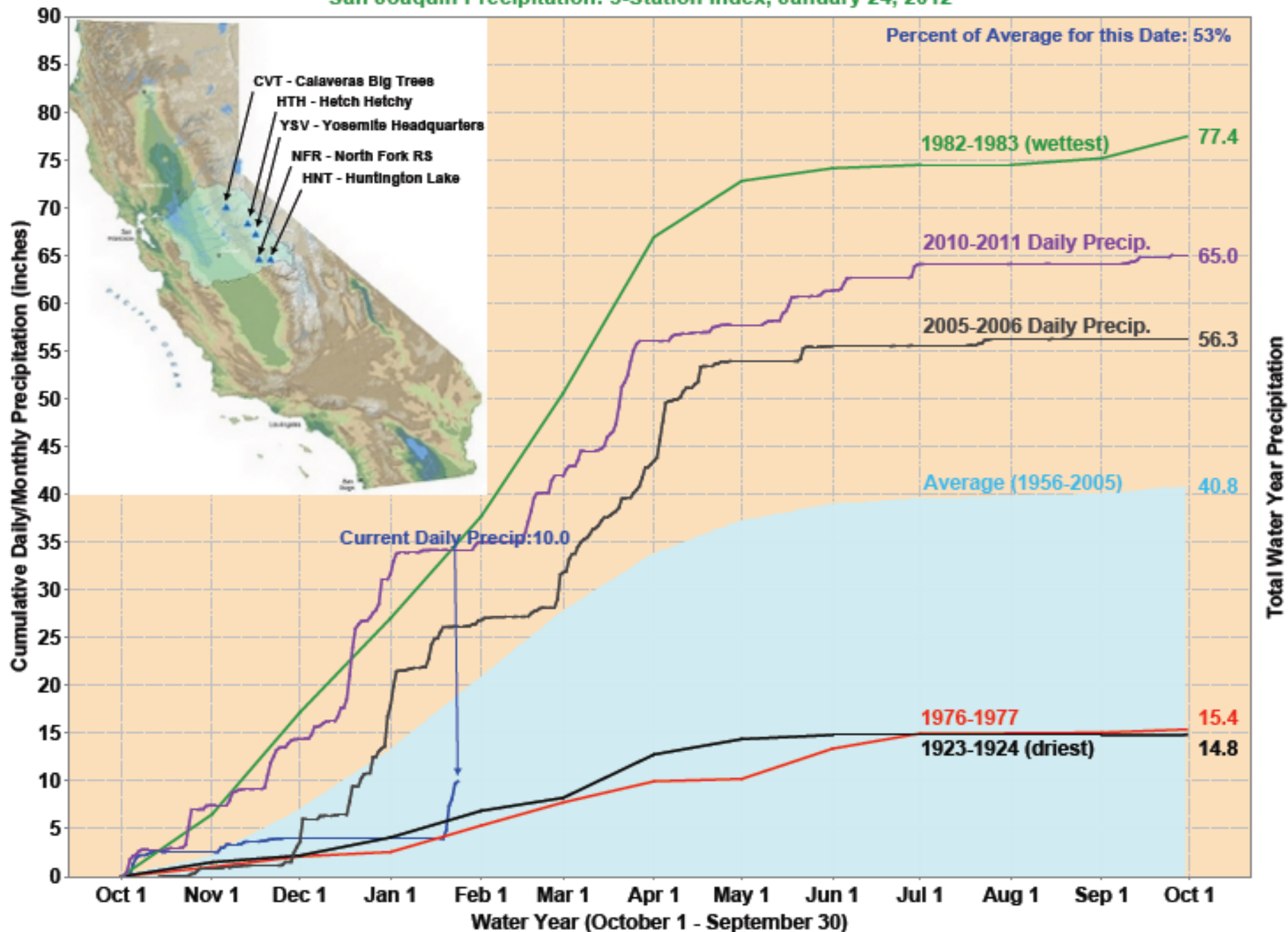
2012 Huntington Lake Precipitation Outlook

■ 2011 ■ 2012-To-Date

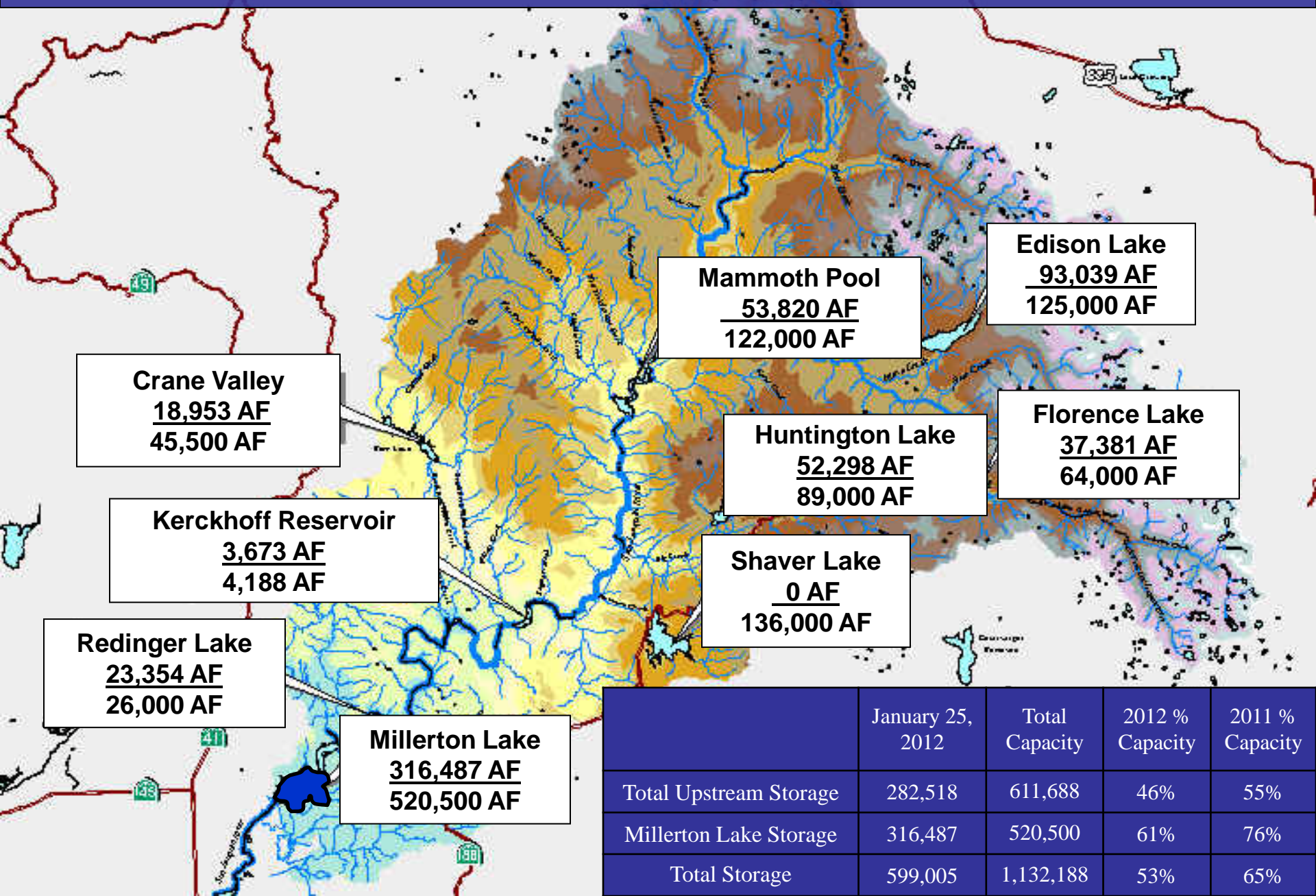


	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct-Jan
2012-to-Date	3.05	1.92	0.00	5.32									10.29
2011	11.65	5.53	15.96	2.37	6.92	14.56	2.20	4.12	3.40	0.04	0.00	0.00	35.51
Average 77-11	2.49	4.40	6.81	8.22	8.12	7.03	3.75	2.10	0.71	0.44	0.18	0.86	21.92

San Joaquin Precipitation: 5-Station Index, January 24, 2012



San Joaquin Basin Upstream Storages



Crane Valley
18,953 AF
45,500 AF

Kerckhoff Reservoir
3,673 AF
4,188 AF

Redinger Lake
23,354 AF
26,000 AF

Millerton Lake
316,487 AF
520,500 AF

Mammoth Pool
53,820 AF
122,000 AF

Huntington Lake
52,298 AF
89,000 AF

Shaver Lake
0 AF
136,000 AF

Edison Lake
93,039 AF
125,000 AF

Florence Lake
37,381 AF
64,000 AF

	January 25, 2012	Total Capacity	2012 % Capacity	2011 % Capacity
Total Upstream Storage	282,518	611,688	46%	55%
Millerton Lake Storage	316,487	520,500	61%	76%
Total Storage	599,005	1,132,188	53%	65%



2012 Water Supply Outlook Millerton Lake

■ Class 1 Water Supply Available (AF)

■ Interim Restoration Flows (AF)

Exceedance January 1 Forecast

1,250,000

1,000,000

750,000

500,000

250,000

-

90% Exceedance

50% Class 1

Critical High

WY: 639,000 AF

A-J: 407,000 AF

400,000

226,744

50% Exceedance

80% Class 1

Normal Dry

WY: 1,260,000 AF

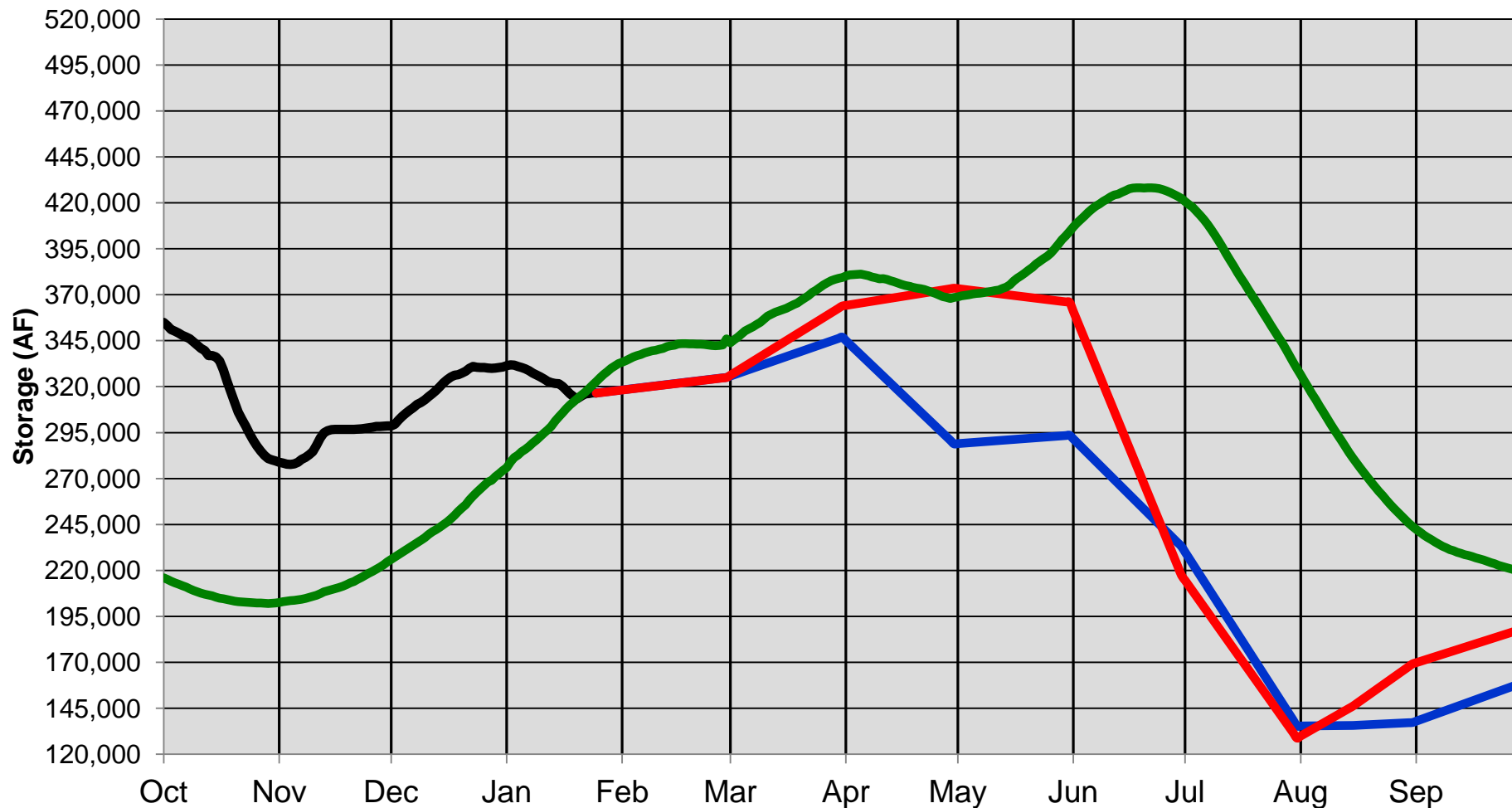
A-J: 861,000 AF

640,000

336,344

2012 Millerton Lake Storage Outlook

— WY 2012-to-date — 50% Exceedence — 90% Exceedence — Average 70-11



Note:

January 25, 2012: **316,487 AF**

January 25, 2011: **396,666 AF**

Maximum Lake Storage

July 7, 2011: **526,143 AF**

50% 2012 Forecast: **346,900 AF** (March)

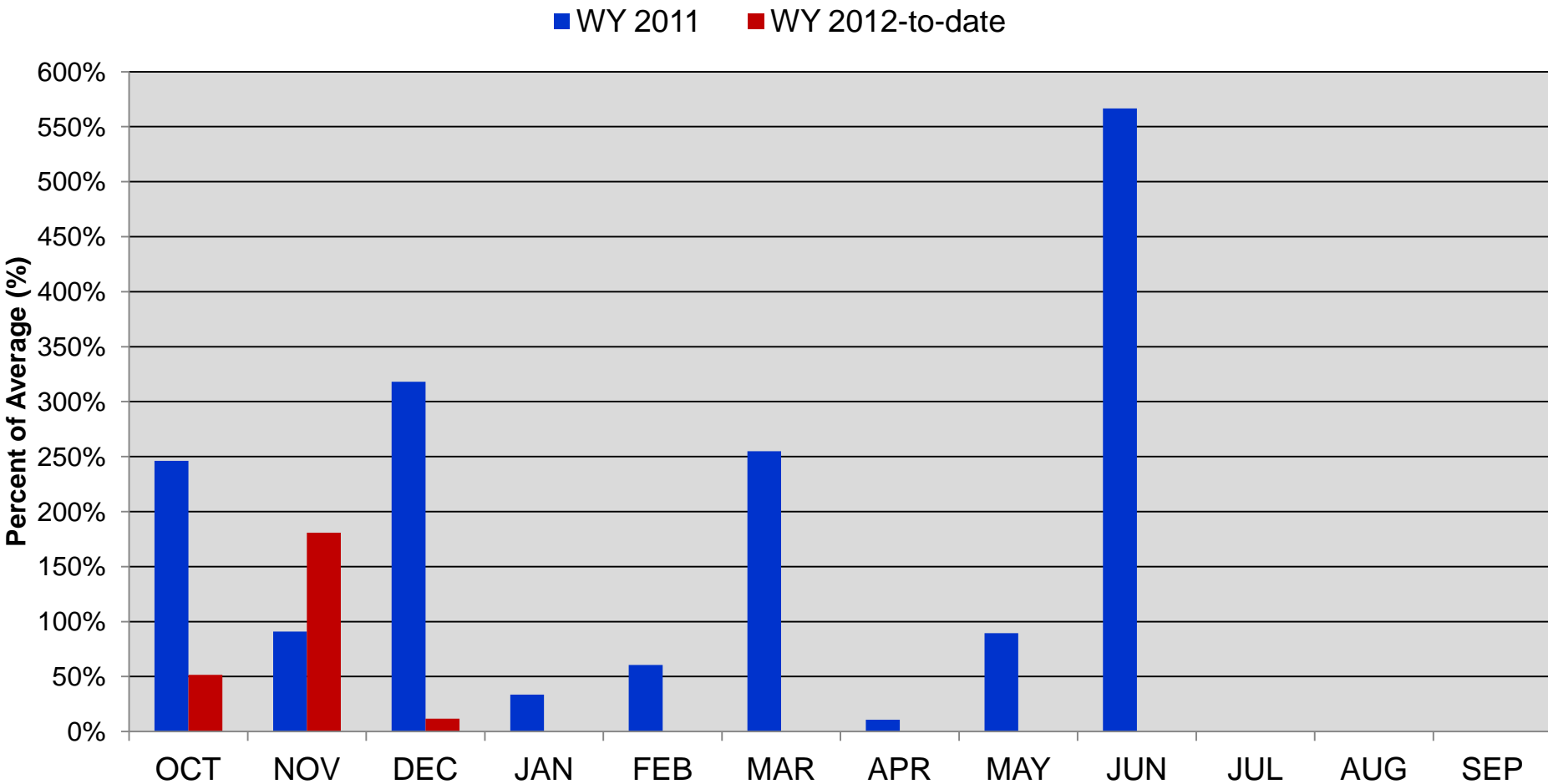
90% 2012 Forecast: **373,600 AF** (April)

2012 Cachuma Project Outlook





2012 Bradbury Dam Precipitation Outlook



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct-Jan
2012-to-date	0.47	2.82	0.35	1.58									5.22
2011	2.24	1.42	9.48	1.84	3.36	11.85	0.14	0.42	0.34	0.00	0.00	0.00	14.98
Average 77-11	0.91	1.56	2.98	5.48	5.55	4.65	1.30	0.47	0.06	0.01	0.02	0.12	10.93



2012 Cachuma Project Water Supply Outlook

- **January 25, 2012:**
 - **Storage Capacity: 195,578 AF**
 - **Current Storage: 171,423AF (119% of Avg.)**
 - **Avg. Storage: 143,645 AF**
 - **Water Supply: 25,714 AF/100%**
- 

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Managing Water in the West

**Klamath Basin Area Office
Klamath Falls, OR
Water Supply Outlook
January 2012**



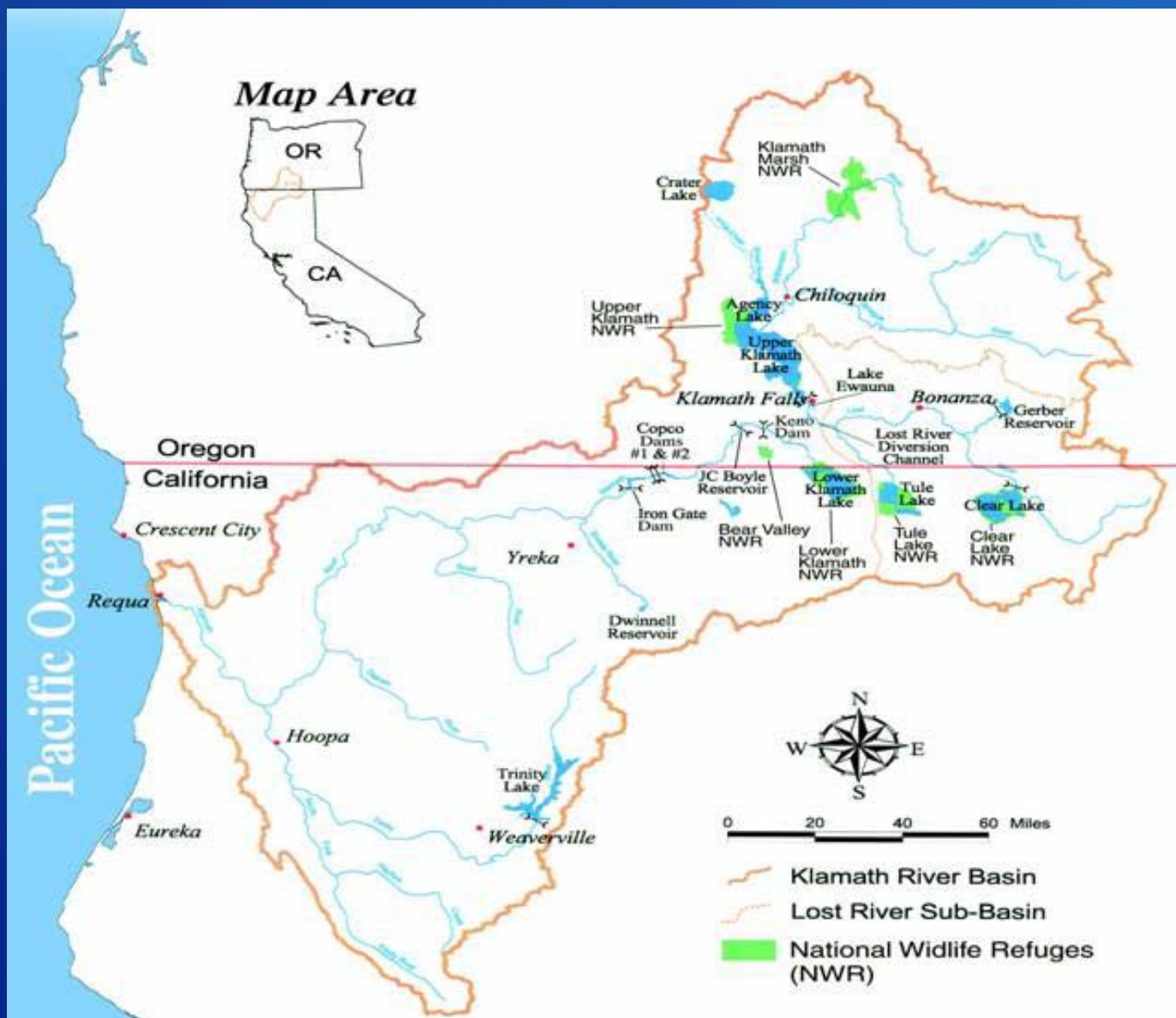
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Klamath Basin Forecast



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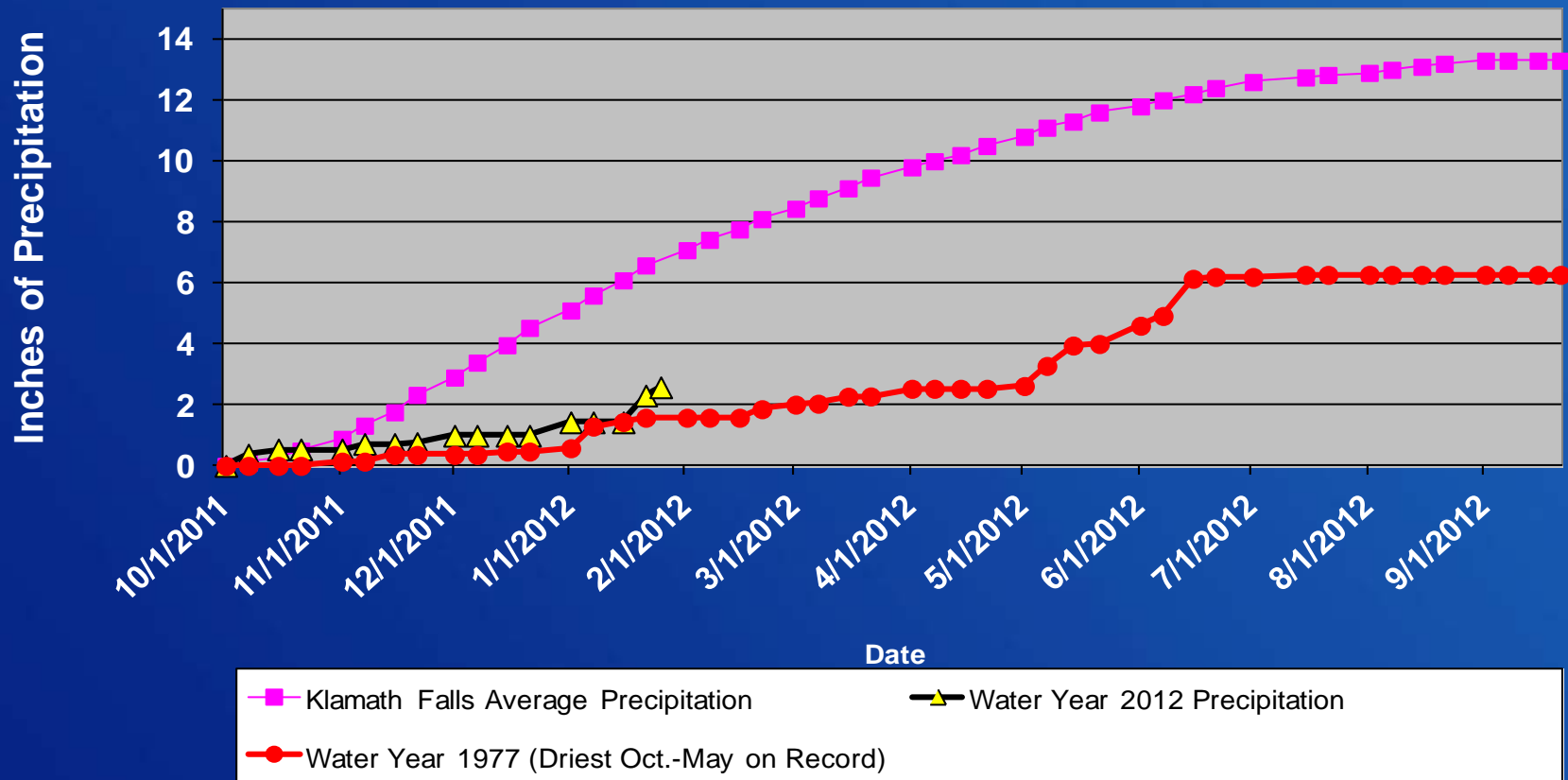
Klamath Basin Outlook



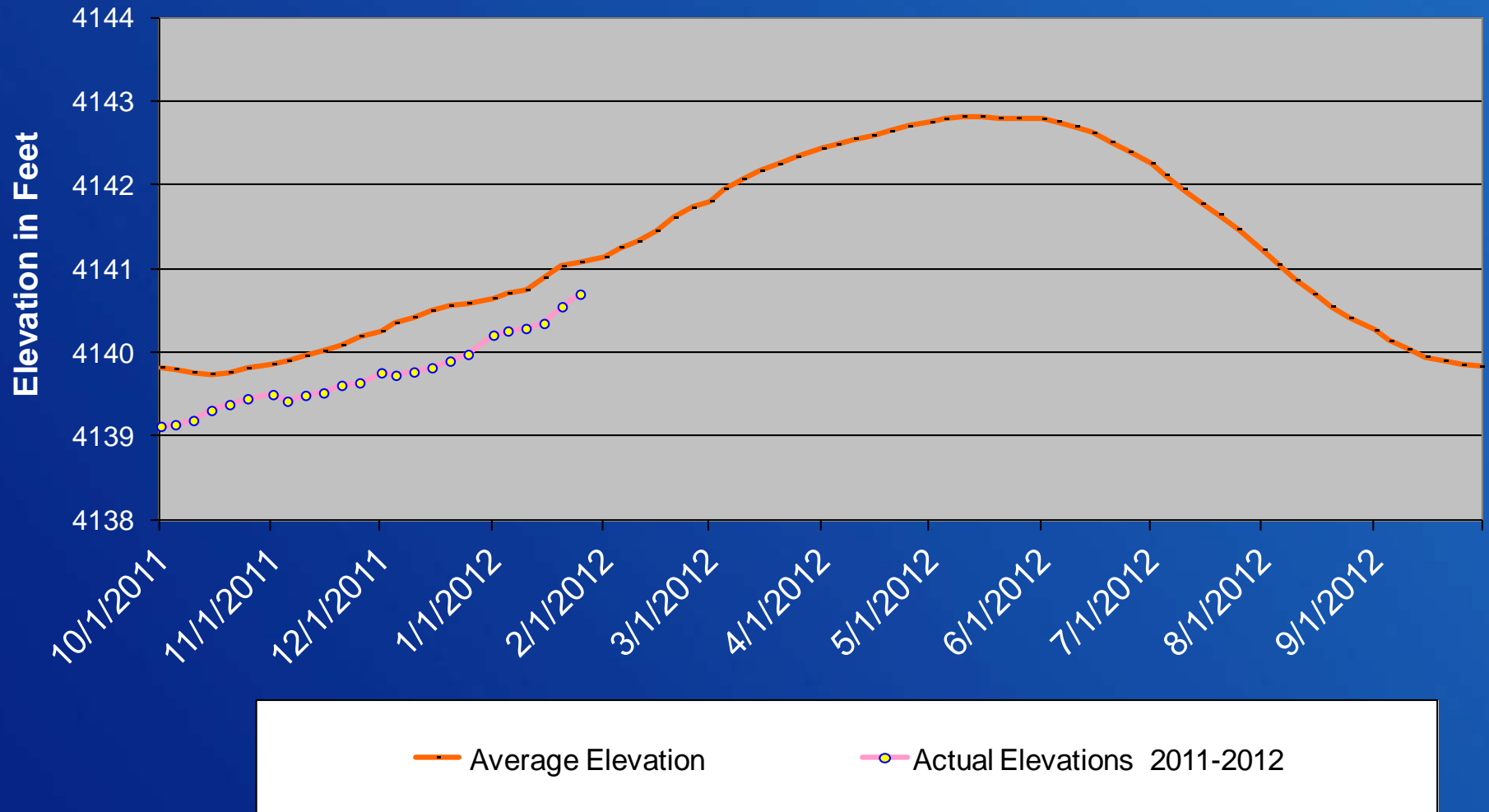
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Klamath Falls Precipitation

Comparing Klamath Falls Water Year 2012 Precipitation with Average Precipitation and Water Year 1977 Precipitation (Driest Oct.- May Period on Record)



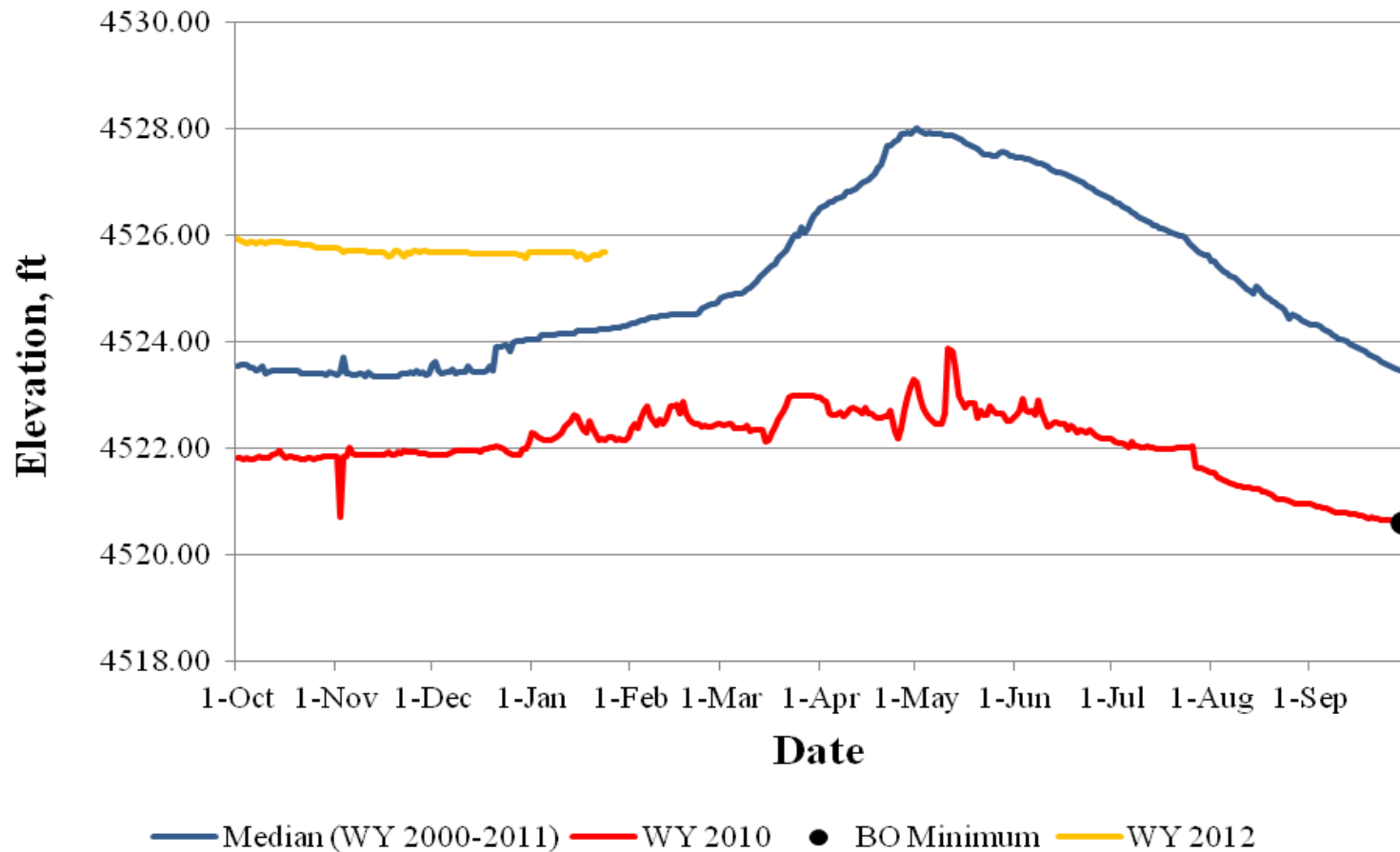
Upper Klamath Lake



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Clear Lake Reservoir

Clear Lake Reservoir Water Year 2012



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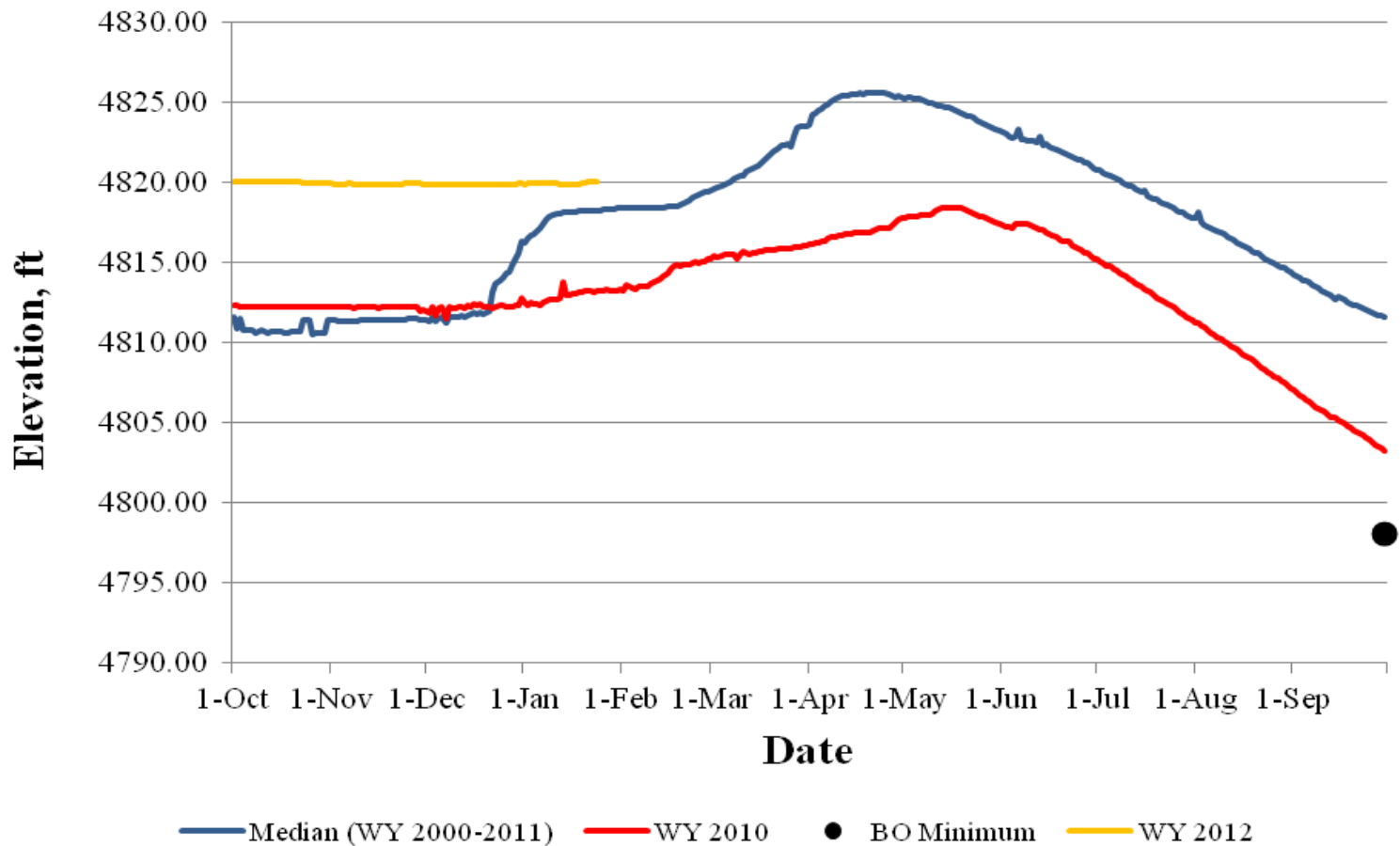
Clear Lake Reservoir

Exceedance	Estimated Water Supply Above BO Min and Evap/Seepage
50%	68.84 TAF
70%	48.95 TAF
90%	18.89 TAF

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Gerber Reservoir

Gerber Reservoir Water Year 2012



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Gerber Reservoir

Exceedance	Estimated Water Supply Above BO Min and Evap/Seepage
50%	63.50 TAF
70%	51.54 TAF
90%	38.94 TAF

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Natural Resources Conservation Service

January 24th Klamath Basin Forecast

Most Probable (50% Exceedance)

- **Upper Klamath Lake Inflow (April – September)**
 - 305,000 acre-feet
 - 59% of average
- **Clear Lake Inflow (February – July)**
 - 70,000 acre-feet
 - 67% of average
- **Gerber Reservoir Inflow (February – July)**
 - 32,000 acre-feet
 - 68% of average

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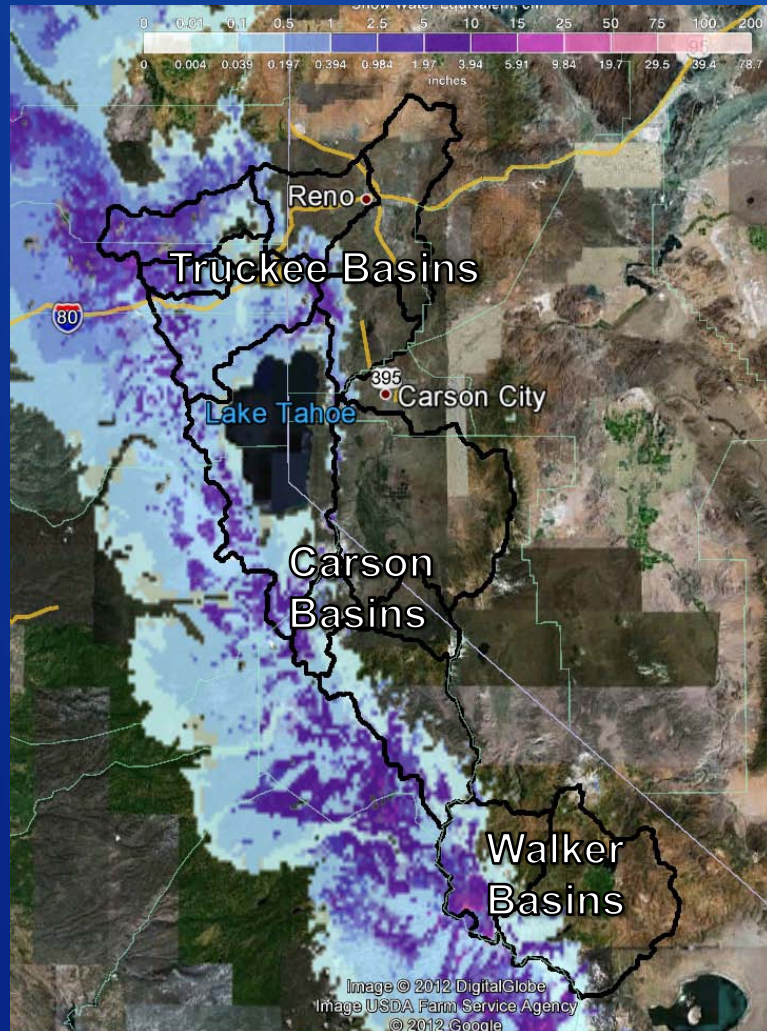
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**Lahontan Basin Area Office
Carson City, NV
Water Supply Outlook
January 2012**



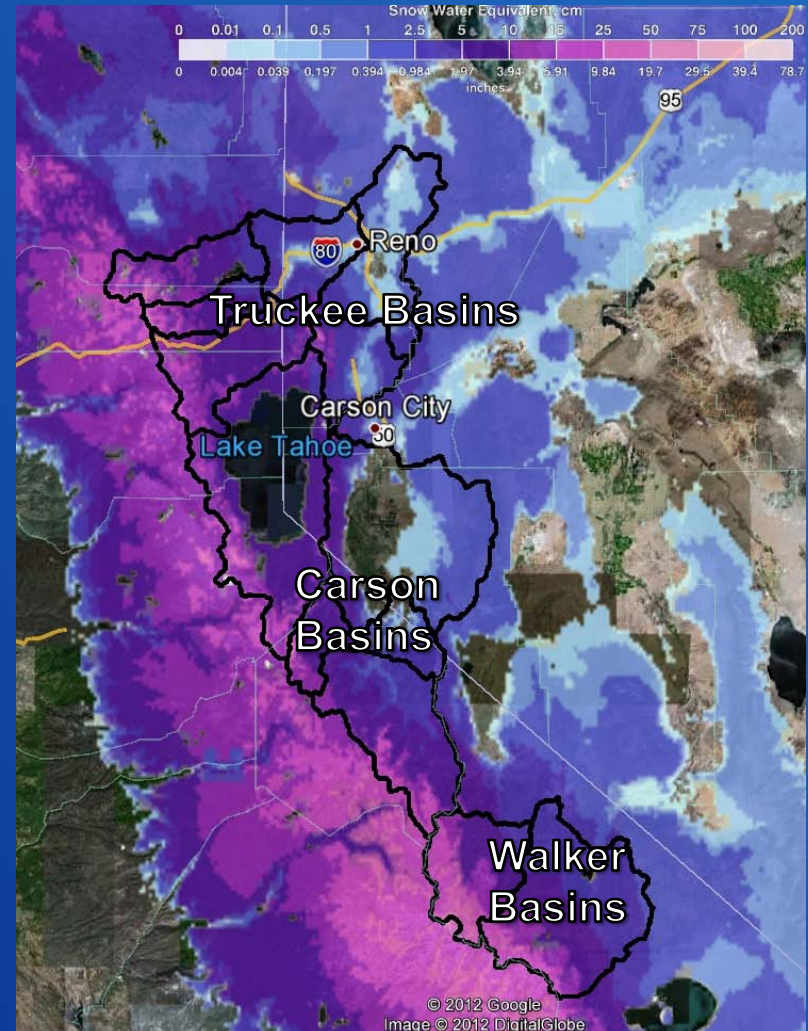
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Pre-Storm Snowpack



1/20/12 - Before Storm, Snowpack
8% to 14% of Average

Post-Storm Snowpack (Current)

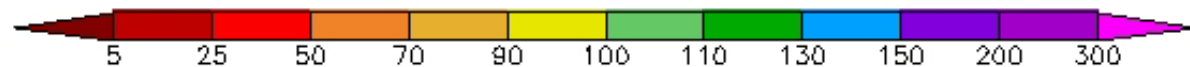
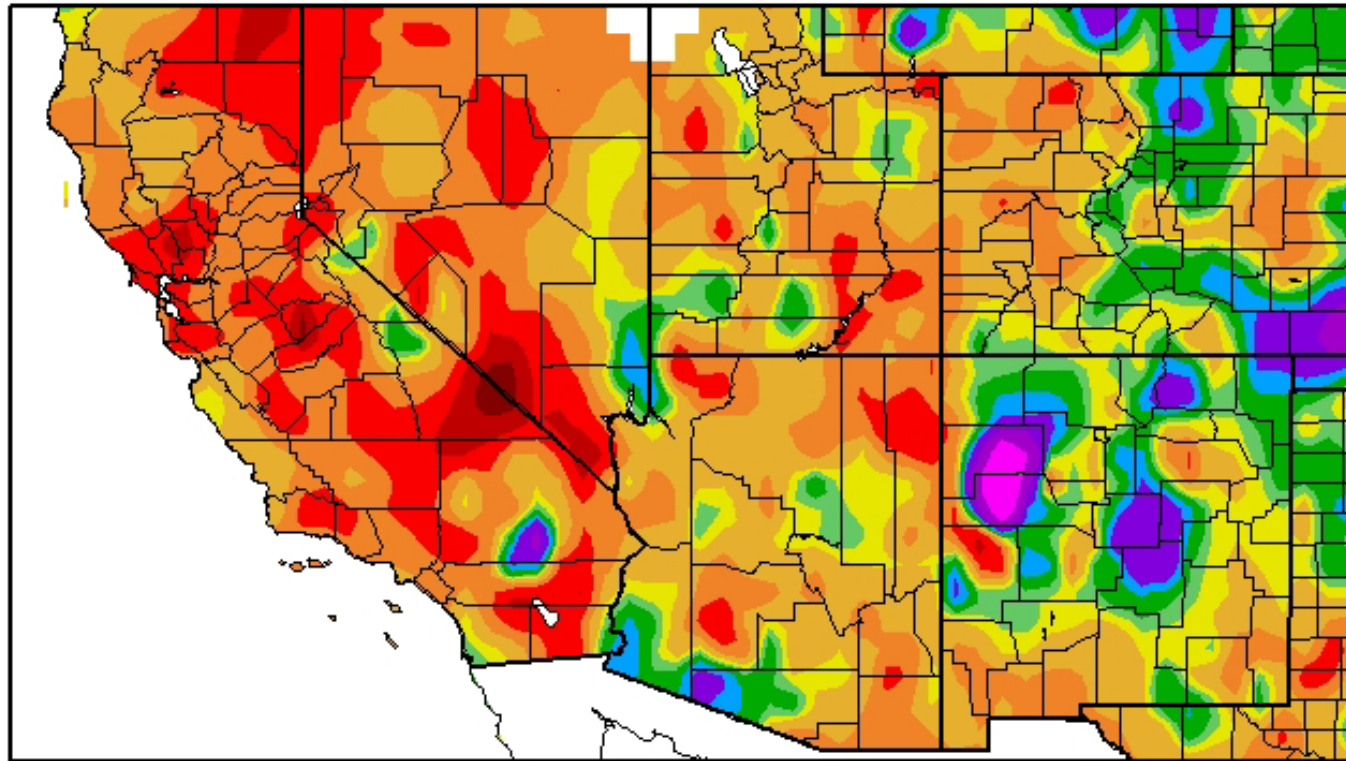


1/24/12 - After Storm, Snowpack
38% to 41% of Average

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Southwest Precipitation % of Normal

Percent of Normal Precipitation (%)
10/1/2011 – 1/23/2012



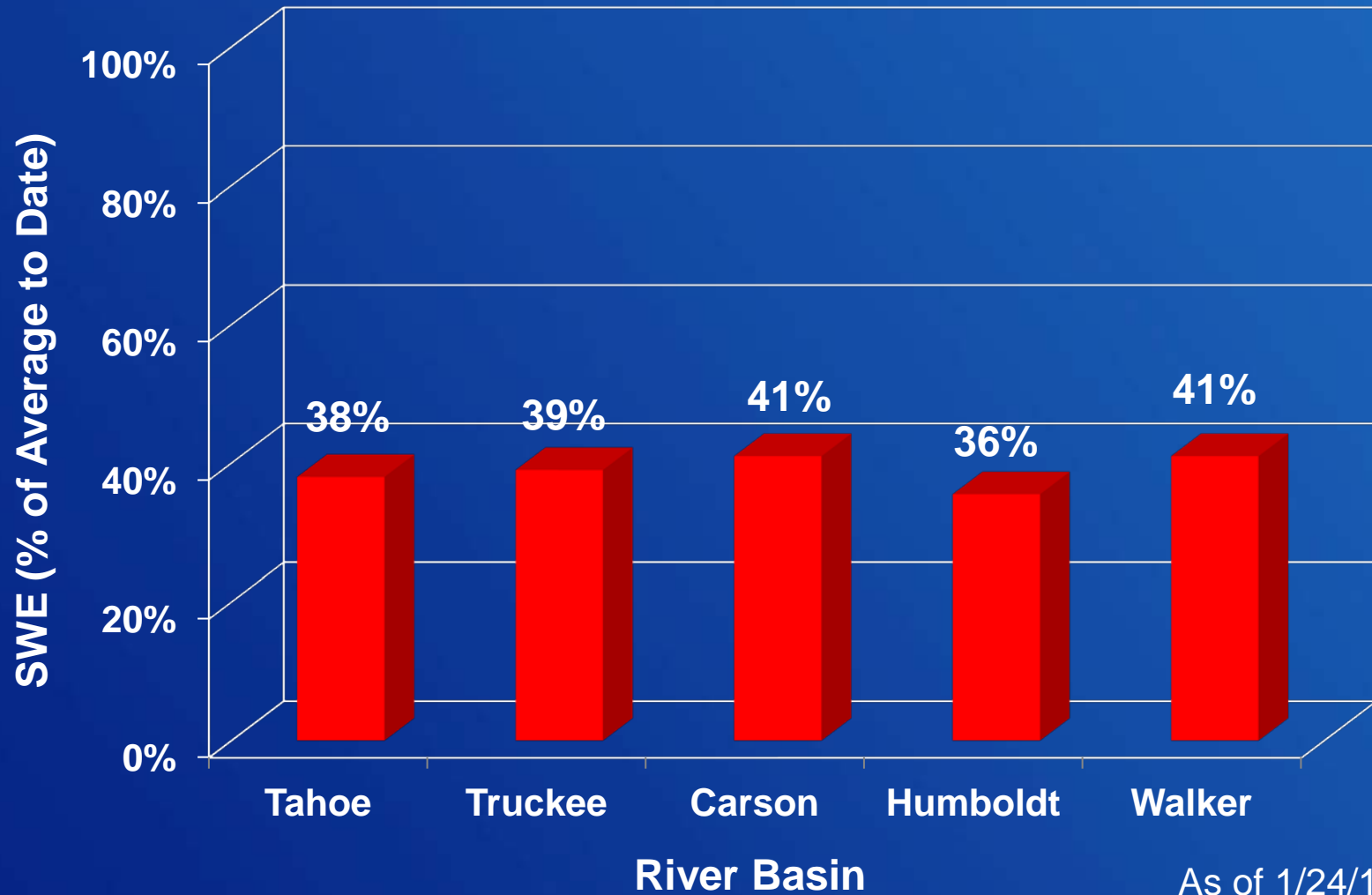
Generated 1/24/2012 at HPRCC using provisional data.

Regional Climate Centers

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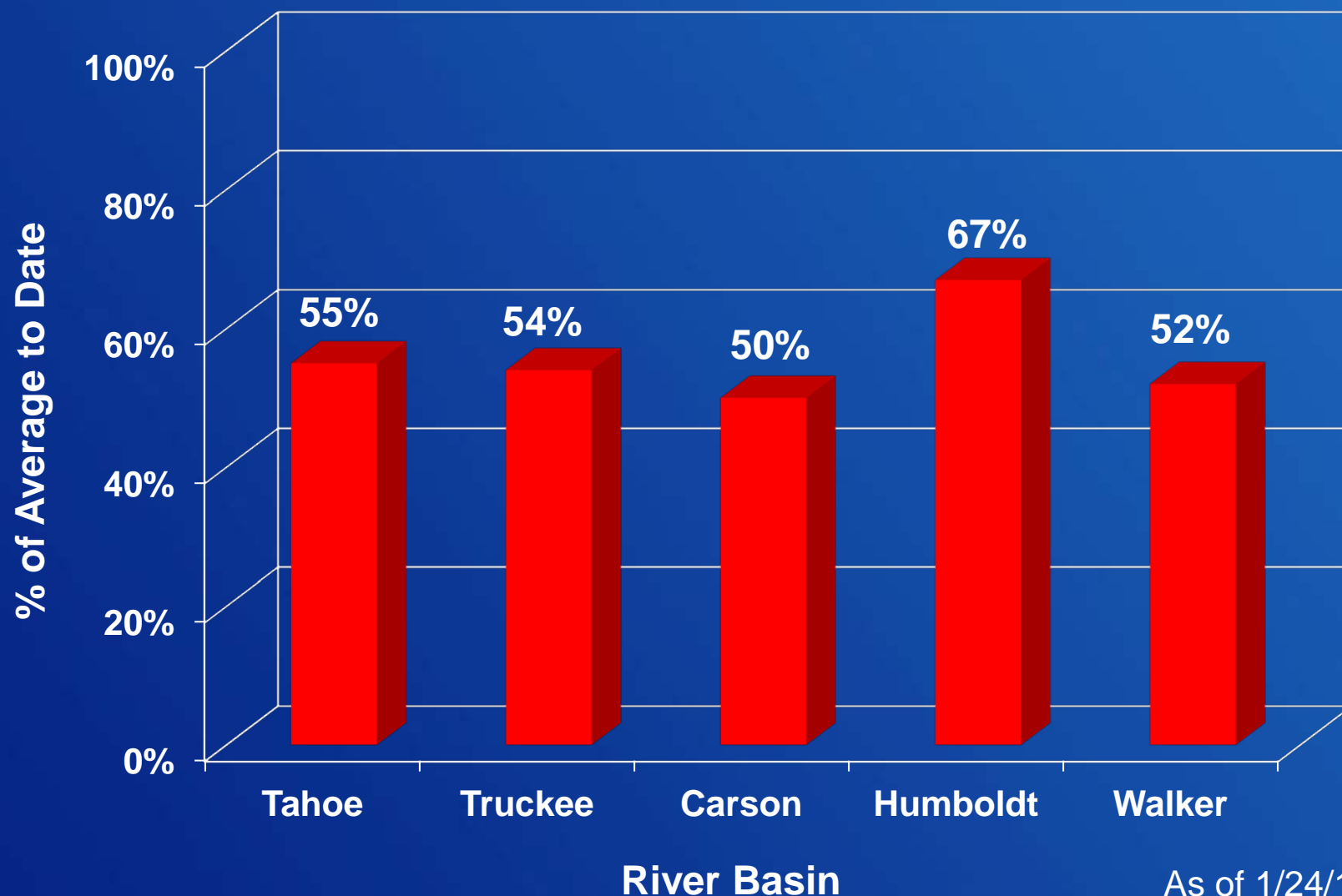
Current LBAO Snowpack Conditions (Snow Water Equivalent)



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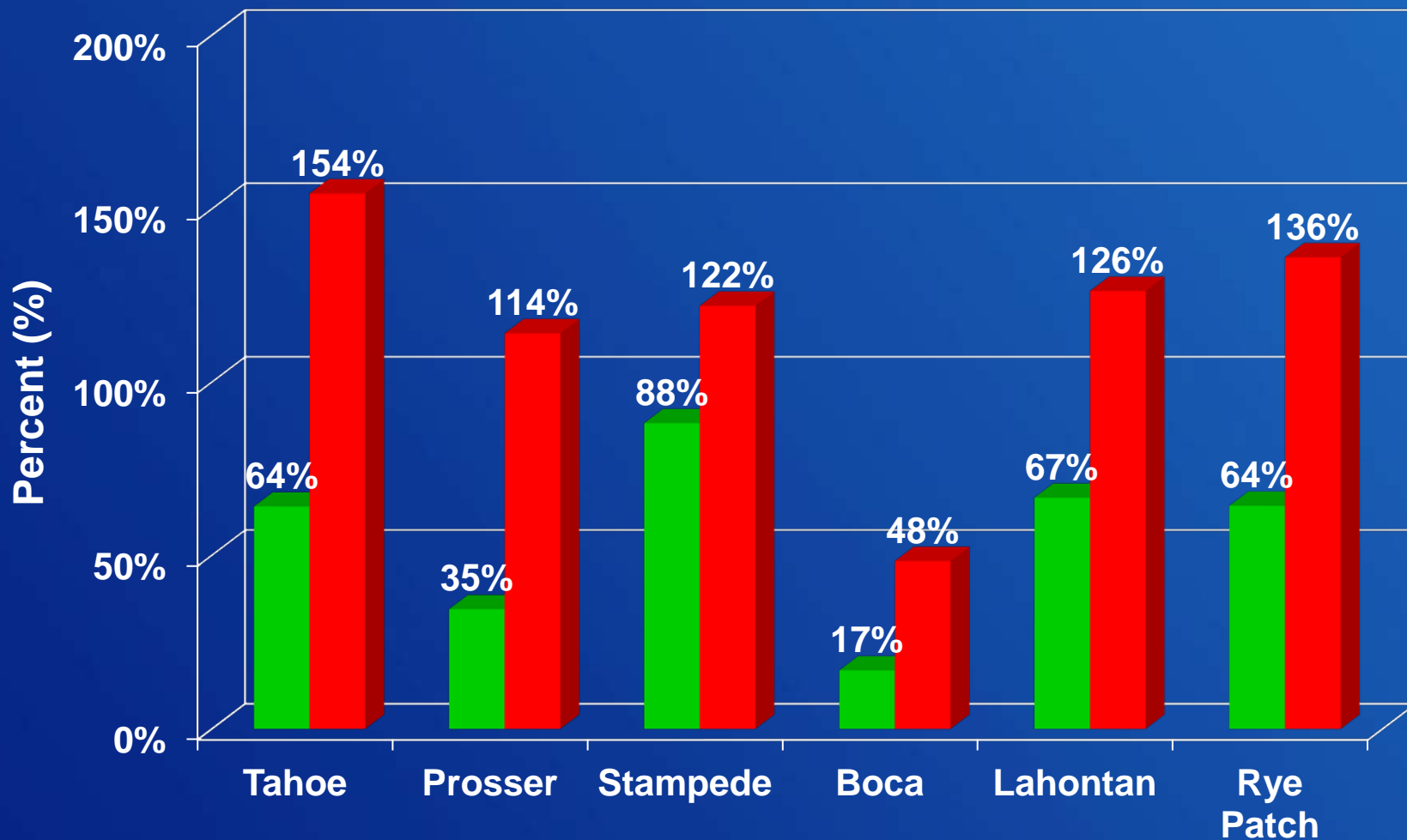
LBAO Water Year Precipitation To Date



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LBAO Reservoir Storage

■ % of Capacity ■ % of Average

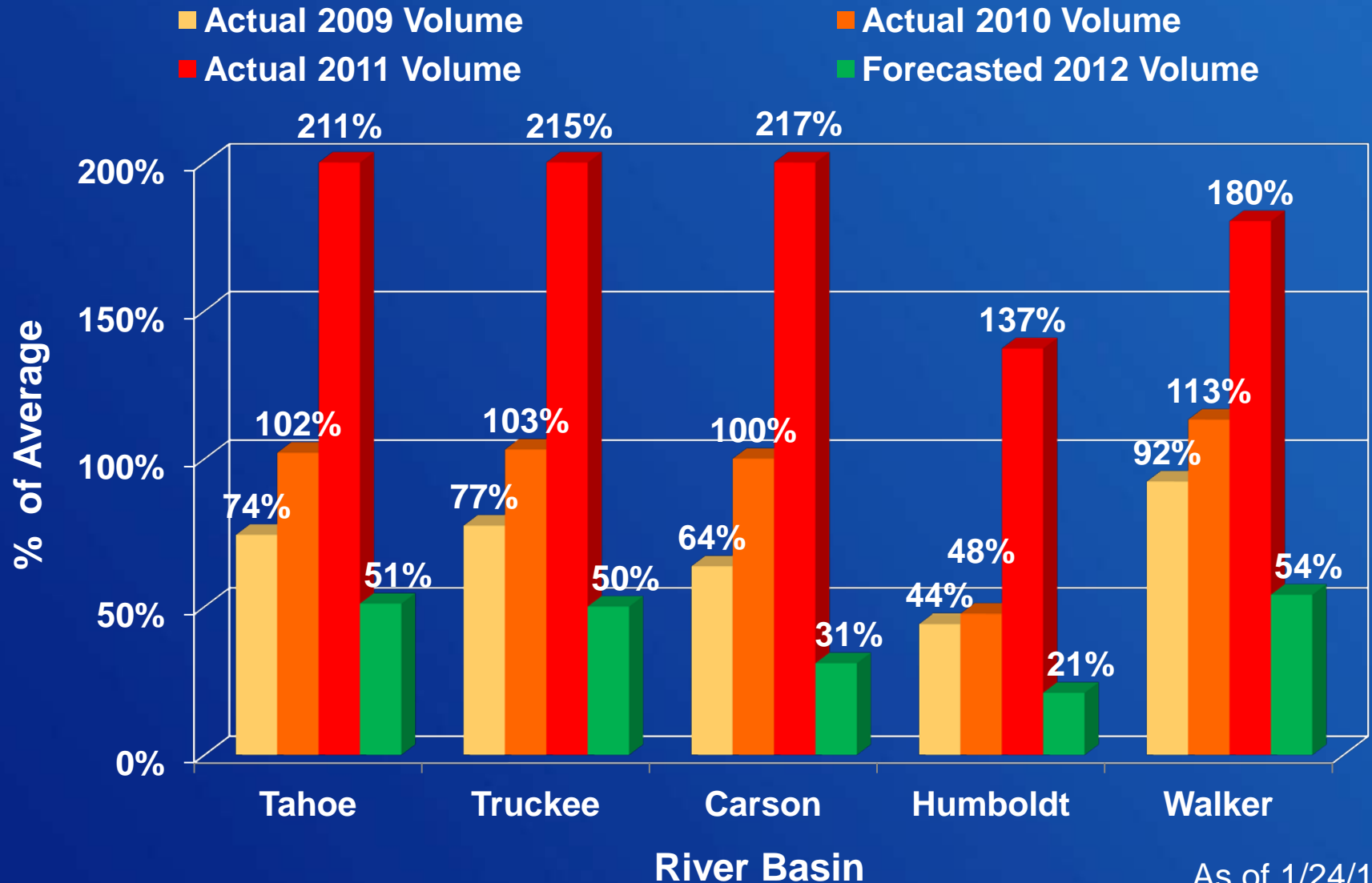


As of 1/24/12

Reservoir

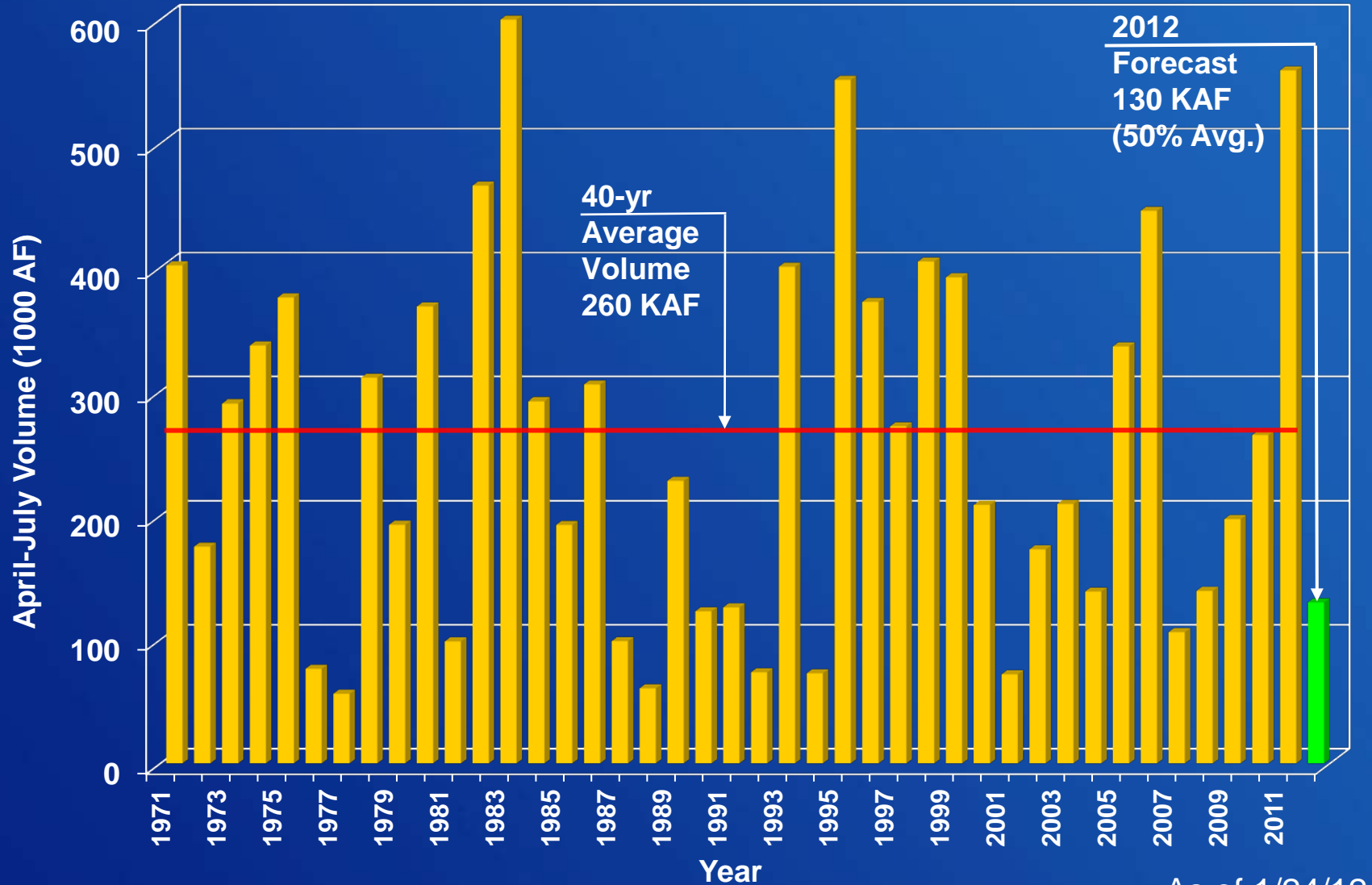
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LBAO April-July Runoff Trends



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Historical Truckee River Runoff April-July



As of 1/24/12

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The 45th WUC Presentation Online :

<http://www.usbr.gov/mp/PA/water/index.html>

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Questions?



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